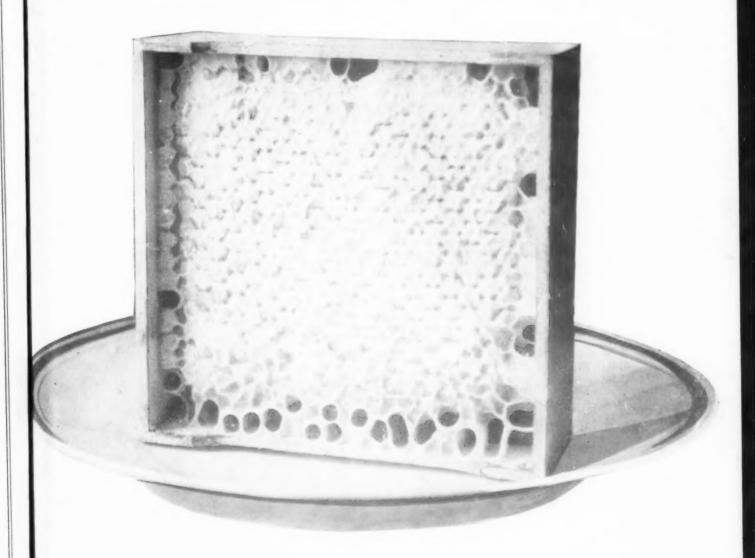
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AMERICAN BEEJOURNAL

NOVEMBER

1928



THIS ADVERTISING BUSINESS

-ROBERT M. MEAD

FACTORY METHODS APPLIED TO HONEY PRODUCTION—FRANK C. PELLETT MANITOBA HONEY DAY

-L. T. FLOYD

HONEY IN FANCY AND IN FACT

-P. MABEL NELSON

CONTINENTAL HONEY CONTAINERS

The Solution of Your Packaging Problems

Solve your Honey packaging problems by using Continental Honey Containers. Continental Cans make a strong appeal to your customers and assure the Honey reaching them in excellent condition.

In this competitive age, their economy is a most important factor to you. Such other advantages of easy filling. lightness of weight, and unbreakableness, permit of easy handling and shipping at low cost. Every can is carefully tested to insure against leaks.

These bright, clean containers are made in sizes to meet your every need. Complete information, prices, terms or samples may be secured from any of our Distributors listed below or any of our Offices.

Distributors

THE BROCK STORE Decatur, Indiana

DADANT & SONS Hamilton, Illinois

G. B. LEWIS COMPANY Watertown, Wisconsin Albany, New York Sioux City, Iowa Lynchburg, Virginia Texarkana, Ark.

MAGILL & COMPANY Fargo, N. Dak.

MOUNTAIN STATES HONEY PROD. ASS'N Boise, Idaho

NORTH DAKOTA BEE SUPPLY CO. Moorehead, Minn.

A. I. ROOT COMPANY OF IOWA Council Bluffs, Iowa

A. I. ROOT COMPANY St. Paul. Minnesota Chicago, Illinois San Antonio, Texas

SUPERIOR HONEY CO. Los Angeles, Calif. Seattle, Washington LONE STAR BEE

SUPPLY COMPANY San Antonio, Texas

A. G. WOODMAN CO. Grand Rapids, Mich.

FRED W. MUTH CO. Cincinnati, Ohio

STANDARD LUMBER CO. Winona, Minnesota

CARL F. BUCK Walla Walla, Washington

SIOUX HONEY ASSN. Sioux City, Iowa

> J. W. REID Uvalde, Texas

BURROWS HDWF, CO. Beeville, Texas

CONTINENTAL CAN COMPANY, Inc.

Coast to Coast

4622 West North Avenue Chicago, Illinois

Los Angeles St. Louis Cincinnati

Detroit Jersey City

SPECIAL SALE

| 100 | 5-lb. | Pails | 6.50 |
|-----|-----------|-----------|-------|
| 500 | 5-lb. | Pails | 30.00 |
| 100 | 10-lb. | Pails | 10.00 |
| 500 | 10-lb. | Pails | 45.00 |
| 100 | 2 1/2 -lb | . Cans | 4.30 |
| 500 | 2 1/2 -lb | . Cans | 20.00 |
| 1 C | rate 2- | 60 (used) | .50 |

SPECIAL

| Shipping | cases with glass holding 24 section | ns: |
|----------|-------------------------------------|-----|
| 10 cases | 4 1/4 x1 1/8 Flat\$3. | 95 |
| 10 cases | Plain Sizes 3. | 80 |
| 10 cases | Double Deck4. | 60 |

Send us a sample of your honey and quote your best price. We will buy for cash or trade for bee supplies.

SPECIAL

8-ounce Jars, two dozen in case

85c Per Case

One case or a hundred

16-oz. Fluted Jars ____ \$1.25 case two dozen

| 5-oz | . Plain | Jars | | .95 | case | two | dozen |
|------|---------|--------------|---------|-------|------|------|--------|
| 100 | Comb | Honey | Cartons | | | | \$.95 |
| 1000 | Comb | Honey | Cartons | | | | 7.00 |
| | For | 11/4 × 1 7/4 | or 4x5 | v1 86 | sect | ions | |

| P | ack | you | 11 | bees | with | tarred | felt | for | winter | |
|-----|-----|-----|----|-------|------|--------|------|-----|--------|---|
| 324 | sq. | ft. | to | roll, | heav | y grad | e | | \$3.0 | 0 |
| 500 | sq. | ft. | to | roll | thin | grade | | | 2.2 | 5 |

Ship your old comb and beeswax to us to be worked into foundation or for cash.

THE FRED W. MUTH CO.

CINCINNATI, OHIO

GLASS AND TIN HONEY CONTAINERS

| 2½-lb. cans in cartons of 100 | \$4.00 car. |
|---|-------------|
| 10-lb. pails in cartons of 50 | 5.00 " |
| 60-lb. tins, NEW, 2 tins per case | 1.00 case |
| 60-lb. tins, USED, 2 tins per case | .35 44 |
| 160-lb. kegs (the ideal container for both Buckwh | neat and |
| Clover Honey) | 1.20 each |

GLASS IARS WITH GOLD LACOUERED CAPS

| | | 3 | | | | DITTE CONTENT | | | |
|---------|----------|-----------|---|------|-----|---------------|--------|------|--|
| 16-oz. | Honey | Capacity, | 2 | doz. | per | carton | \$1.20 | car. | |
| 3-lb. c | or Quart | Capacity, | 1 | doz. | per | carton | .90 | 6.6 | |

SPECIAL HAZELATLAS TALL JARS

| 8-oz. | Honey | Capacity, | 2 | doz. | per | carton | \$1.05 | car. |
|--------|-------|-----------|---|------|-----|--------|--------|------|
| 16-oz. | Honey | Capacity, | 2 | doz. | per | carton | 1.35 | 4.6 |
| | | Capacity. | | | | | 95 | 4.6 |

BEE SUPPLIES

OMB HONEY SUPERS—10-FRAME

No. 1, for 41/4x41/4x17/8 sections, at \$4.00 per 5 k. d.

No. 3, for 4x5x13/4 sections, at \$6.50 per 5 k. d.

HONEY ALL GRADES—ANY QUANTITY

HOFFMAN & HAUCK, Inc. Ozone Park, New York

HOLIDAY GIFT BOOKS FOR WINTER READING

Here is a list of bee books on general, special, and technical bee subjects, that should appeal for winter reading. Books on bee-lore, bee-behavior, for specialists, for children, for lawyers, or for nature lovers.

They make good holiday gifts for any member of the family.

| | os |
|--|-----|
| Spirit of the Hive-Dallas Lore Sharp | - 1 |
| Flower and the Bee-J. H. Lovell | - |
| Bees and Beekeeping-Cheshire (2 vol.) | - |
| Fifty Years Among the Bees-Miller | |
| Embryology of the Honeybee-J. A. Nelson | - |
| Anatomy and Physiology of the Honeybee-Snodgress | В |
| Mysteries of the Hive-D. Evrard | |
| Manual of the Apiary-A. J. Cook | |
| Honeybees and Fairy Dust (Children) - M. G. Phillips | 8 |
| The Yankee Abroad-Harry Lathrop | |
| Life of the Bee-M. Maeterlinck | |
| Bee Anatomy—Annie D. Betts | - |
| Law of the Honeybee-Campbell | 100 |
| Practical Bee Guide-J. G. Digges | |
| Honey Makers-M. Morley | - |
| Lore of the Honeybee-T. Edwardes | - |
| Bee People-Morley | |
| Beekeeping-E. F. Phillips | _ |
| Advanced Bee Culture-W. Z. Hutchinson | _ |
| The Humble Bee-F. W. L. Sladen | _ |
| low to Keep Bees-Anna B. Comstock | - |
| Money in Bees in Australia-T. Rayment | - |
| Quinby's New Beekeeping-L. C. Root | |
| Mysteries of Beekeeping Explained-Quinby | |
| A B C and X Y Z of Bee Culture-A. I. and E. R. Roo | t |
| Unsere Bienen-Ludwig | |
| International Beekeepers' Report, Quebec | _ |
| L'Apiculture Intensive et L'Elevage des Reines- | |
| Perret-Maisonneuve | _ |
| Pearce Method of Beekeeping | - |
| Biggle Bee Book-Biggle | |
| Honey-Way Menus-Fischer | |
| Honey Plants of North America-Lovell | |
| Southern Bee Culture-J. J. Wilder | |

Send all orders to

American Bee Journal, Hamlton, Ill.

FOR 1929

PACKAGE BEES ITALIAN OUEENS BEST CYPRESS BEE HIVES FRAMES FOUNDATION

The Stover Apiaries

Tibbee Station, Miss.

Telegraph Office and shipping point, Mayhew, Miss.

BARGAINS

Quality Honey Containers

5 lb. Pails 10 lb. Pails 60 lb. Square Cans Glass Ware Comb Honey Shipping Cases

Write for our 1928 Price Sheet

LEAHY **MANUFACTURING COMPANY**

HIGGINSVILLE, MISSOURI

Does Price Alone Influence Your Buying?

Some let price be their sole guide in buying. Quality and grade are secondary. They are willing to trust to luck that it will be satisfactory.

We are interested in having your business, not for one shipment alone. but as a regular buyer. We appreciate the part price plays, but also the greater importance of quality and grade.

Let us quote on your needs in SEC-TIONS and other bee supplies.

August Lotz Company Boyd, Wisconsin

er

SERVICE FROM

CHICAGO

We carry at all times

LARGE STOCK

Of Root "Quality" Goods

WHAT YOU WANT IT

Write now for our new Container Circular

A. I. Root Co., of Chicago

224 W. Huron Street, CHICAGO, ILL.

THANKS

At the close of another season we express our appreciation of the very fine volume of business you have given us. Thanks!

Every effort is continually being made by us to produce better and better bee supplies, so that we may have a continuance of your valued business.

Again, we thank you.

The A. I. Root Co. of Iowa

Council Bluffs, Iowa

GET OUR PRICES

Before Buying Beekeepers' Supplies

For your convenience we have included a coupon with this ad. Use it or write us a letter.

Our Guarantee

All goods purchased may be returned if unsatisfactory and money cheerfully refunded. No questions asked.

Our Service

While we ship all over the country, we can give special service to those located in the East—New York, Pennsylvania, New England, and Atlantic Seaboard states.

W. T. FALCONER MFG. COMPANY

FALCONER, N. Y.

W. T. Falconer Mfg. Co., Falconer, N. Y. Gentlemen:

Without obligation on my part, please quote prices. I have swarms.

Hives Sections
Supers Br. Fdn.
Frames Super Fdn.
Bodies

Town State

Address ___

IS YOUR HONEY CROP SHORT?

If it is, you should keep your customers supplied and hold their trade for the future.

We can furnish you— White or Light Amber Honey in 60 lb.; 10 lb.; and 5 lb. cans.

WRITE FOR PRICES

DADANT & SONS

HAMILTON, ILLINOIS

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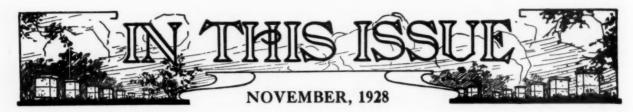
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Our Cover Picture

According to a recent study by Natt Dodge, November is the highest peak month in honey sales. In this month, comb honey, looking its prettiest, goes over big with consumers. The section on the plate, dressing up our cover, is just the kind of a section we want all ours to grade to when we sort the season's crop. It is extra fancy. If only the choice and fancy grades were put on the market, confidence would soon put the product where it belongs.

Quality Honey Containers

Carload stocks ready for immediate shipment, prices are low.

"Diamond I" Fluted Glass Jars.
"Canco" Friction Top Pails and
Cans.

Comb Honey Shipping Cases, Extracting Equipment, Etc.

Write for our 1928 illustrated honey container price list.

W. R. Perry Company

414-416 South 11th Street OMAHA, NEBR.

BEEKEEPING

By E. F. PHILLIPS

Written by such an authority as Dr. E. F. Phillips, formerly head of the Bee Culture Laboratory in the U. S. Department of Agriculture and now head of the Beekeeping Department at Cornell University, this book would grace any bee library.

We are making a special price on a few of the 1922 editions of this book which we still have on hand, to make room for the new edition just coming out.

Our price on these books while they last is only

\$1.50, Postpaid

Or sent FREE if you will send us three new subscriptions to the American Bee Journal at \$1.00 each.

Don't miss this opportunity. Take advantage of it now.

AMERICAN BEE JOURNAL

Hamilton, Illinois

P. S.—The new edition sells at \$4.00

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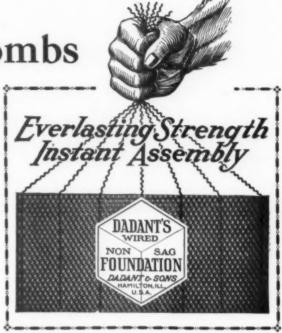
Straight Frame--Filling Combs

With the Least Labor!

In Dadant's Wired Foundation the work of embedding and wiring is all done for you. You have little to do but use it in the quick, simple way shown below.

Seven, stiff, crimped wires of spring steel hold the foundation rigidly at center and go right down through the Lewis slotted bottom bars. It took costly experiments to find a suitable wire. They are not soft, but are of tempered steel. Melt them out of the wax, and they are absolutely straight, sidewise or endwise. Can you beat this support?

Wired Foundation gives solid combs, built out fully, combs that cannot sag. Just keep your hives level from side to side and the combs will delight you.



It Is So Easy To Use

The easiest way in the world to get good combs and strong colonies is to fill your frames with Wired Foundation. Slip the sheets into Lewis slotted



bottom bars, put five nails in each top wedge — and you're done.

No embedding, no fussing; just free, easy work. The foundation is held in the frame snug and tight, saves hours of tiresome work and gives you the greatest possible results in good combs.

"I own and operate better than 1,000 colonies, and Wired Foundation saves me lots of time."

J. D. Beals,
Oto, Iowa.



"Saves the farmer-beekeeper a great deal of time, labor, and patience. Wiring and embedding the old way are so slow when busy with farm work."

A. A. Augenstein, Dakota, Ill.

When you plan your foundation buying consider what this means to you.

Makes the Small Hive Big, and the Big Hive Bigger

Combs are fastened to the sides and along the bottom bars. Cells can't stretch. There



is seldom much lost space above the bottom bars or in the corners, and so little space for drone-cells that the poor fellows have a hard time being born.

Queens can lay from top to bottom and from side to side, resulting in powerful colonies. Every inch of comb is suited for either brood or honey.

Dadant & Sons, Hamilton, Illinois

Makers of Dadant's Famous Foundation

Wired — Plain — Surplus

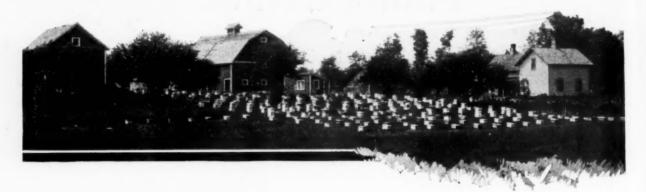


The Only Reenforced Foundation Made Entirely of Pure Beeswax

16200

100

You are within the Fourth Postal Zone of Lewis anywhere East of the Rocky Mountains





BEES built it!

There must be a real satisfaction to spend one's life among such beautiful and peaceful surroundings as this

Michigan has always produced some real bee leaders, and among those who are well known for their success are Mr. and Mrs. S. D. Chapman of Mancelona. The produce of the bees has been a chief means of livelihood for this couple for many years, according to that Michigan authority, Bert Woodman, who praises the fine grade and attractiveness of their product.

It makes us proud that they have only praise for the Lewis Beeware they use.

HONESTLY MADE-

-HONESTLY SOLD

-HONESTLY PRICED

STANDARD OF THE BEEKEEPING WORLD

G.B.LEWIS COMPANY

HOME OFFICE AND WORKS WATERTOWN, WISCONSIN

BRANCHES - ALBANY , NEW YORK

LYNCHBURG, VIRGINIA

TEXARKANA, ARKANSAS

SIOUX CITY, IOWA

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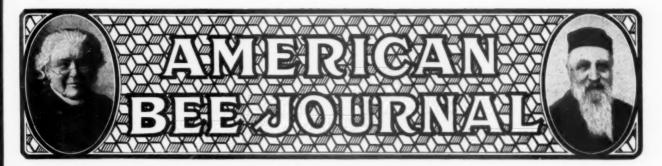
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Vol. LXVIII-No. 11

Hamilton, Illinois, November, 1928

Monthly, \$1.00 a Year

This Advertising Business

By Robert M. Mead

THE average reader may wonder, at times, what makes it possible for a publishing company to create and sell magazines of 150 pages or over at the price of five cents, when part of that five cents must of necessity go to the newsdealer. It would be impossible if it were not for advertising.

The United States has a reading public. Practically everyone reads a magazine or daily paper, or something. With many papers having a paid circulation of a million copies or more per issue, it offers the manufacturer or dealer a fine opportunity to get his proposition before the buying public; at a very reasonable cost, too, in comparison with advertising by mail.

At the present time, advertising has reached a volume undreamed of a few years ago. In many cases there is an actual advertising war between competitive manufacturers. Pick up any popular weekly magazine, the Saturday Evening Post, for example, glance through its pages and note the variety of foods, luxuries and appliances advertised there. Indeed, the casual observer might say that nothing was left out.

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But every beekeeper knows one product that is not nationally advertised-that is honey. For years it has been the ambition and dream of hundreds of beekeepers to have the day come when honey could be advertised the way other foods are advertised. Apparently it is too large a job for any one producer or bottler of honey to undertake. The amount of honey handled by any one agency or under any one brand does not warrant a national advertising campaign in competition with other sweets. The very nature of the business makes such a move impossible for the individual; honey is produced from coast to coast and from north to south.

Mr. Mead suggests a way out of our marketing troubles. He is right. The things he suggests seem about to come into being. Witness the new American Honey Institute and the uniting of big honey packing interests, as announced editorially in the August number.

For every beekeeper that produces a carload or more of honey per year there are hundreds who produce less and still less down to those who sell only a few pounds a year. Especially in New England, there are hundreds of beekeepers whose crop is less than five hundred pounds per season. In fact, there is only a handful of men that can really call themselves commercial beekeepers in the New England States.

Large bottlers of honey and manufacturers of bee supplies who are vitally interested in the welfare of the honey business have undertaken to educate the public as to the value of honey as a food. As a food—there is a great deal in that phrase, because a great many people regard honey as a luxury.

For years the beekeeper has studiously applied himself to production, with good results. Large crops, however, do not necessarily mean prosperity. Unless they move quickly and at a fair figure, they may easily mean disaster. A condition is sometimes apparent in the honey industry that is called stagnation. Honey moves slowly from the storekeeper's shelves and thus it moves slowly in other hands, the producer's and the bottler's.

Honey has competitive sweets which are cheaper in price and also in quality. The need, then, is to convince the public that honey is the best sweet. Cane sugar, which is

sweet and cheap, is not nearly so healthful as honey. In large amounts it may even have a decidedly harmful effect, but it outsells honey by a hundredweight per capita.

Corn sugar, which lacks everything, is used by the ton in candy and as corn syrup. What is the reason? Convincing advertising by wealthy corn sugar people does the work.

There is another sugar that threatens us periodically, made from artichokes. It is much sweeter than cane sugar, but as yet the process for its manufacture is too long and complicated to make it a very serious rival.

Scientific data and medical men are all in favor of honey as a health food. With all the facts in favor of honey, honey advertisements certainly should be convincing. All it needs is to get the facts before the public. Everyone is willing to listen to a doctor, and there are plenty of doctors who believe without reserve in honey. A food product sponsored by a reliable medical man is sure to find favor.

The trouble is advertising costs, costs and then costs. The difficulty of raising a sufficient advertising fund has always been the insurmountable obstacle that has kept bee men from putting honey across. There have been other industries in the same fix, however, which have solved their problem, and the method they used is suggested for beekeeping.

There is one business that formerly held the unique position of being without competition from outside sources—of course there were competitive dealers, but there was only one product that could possibly serve the purpose for which the product was sold. To begin with, there was only one manufacturer—Nature. The product was ice. After awhile

there were plants built which manufactured artificial ice, but just the same it was ice.

Ten years ago, if anyone had suggested that refrigerators, run without ice, would come into general use in the average American home, he would have been considered slightly cracked. But General Motors produced Frigidaire, an iceless refrigerator whose price was such that it was bought by thousands of American families, and the ice man didn't need to stop at the door any longer.

This was slightly annoying to the ice dealers. It became necessary to advertise ice so that the housewife would know there was such a thing. It was too much of a proposition for one ice dealer or one ice manufacturer, so they got together, forgot their differences, pledged money in proportion to the size of their business towards an advertising fund, and the National Association of Ice Industries was founded. Today one can read their advertisements in any paper that is read by the American family or by the American housewife.

Why not the same move by the honey industry? Let each producer, bottler or manufacturer, vitally in-

terested in the business, pledge a percentage of his income from honey sales towards a general advertising fund. Let the work be in the hands of a few men who can handle such a business competently.

The idea is not a day dream; it is a recognized business method, used by businesses which are of necessity or by nature scattered over a large country and among hundreds of individuals. It is not a method that can fail, because it would benefit every producer who contributed. As it would satisfy the individual by helping move his honey, it would satisfy the industry as a whole by generally improved conditions. The laundry owners and bakers advertise that way, why not the bee men?

Vermont.

Red Cross Roll Call

The American Red Cross will launch its twelfth annual roll call for memberships in its ranks on Armistice Day, November 11. This roll call will continue until Thanksgiving, November 29. The appeal to join is addressed to the whole nation, irrespective of race or creed.

Chartered by Congress to render

humanitarian service in the name of the people, at home and on foreign soil if need arises, the American Red Cross is supported in these activities by the individual membership of each American who joins during the annual roll call.

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Certain broad mandates are laid on the Red Cross as an organization, by its charter from Congress. These are to render national and international relief in time of disaster, whether by pestilence, famine, fire, flood, or other great calamity; and equally important, to act as a medium of the people in extending certain ministrations to disabled veterans of the country's fighting ranks, and to those of our present army and navy, in home stations or on foreign duty.

As a part of its year-to-year program, the American Red Cross:

Supplements government assistance to war veterans and their families, and provides friendly service to men of the army and navy.

Provides relief and rehabilitation for disaster sufferers at home, and represents the American people in extending aid in foreign catastrophies.

Maintains a reserve of nurses for government and emergency service.

Assists in developing individual and community health, and assists in preservation of human life through such services as public health nursing, instruction in home hygiene and care of the sick, life-saving, first aid instruction, and nutrition instruction.

Organizes and trains volunteers for conduct of its services.

Sponsors the Junior Red Cross, which is recognized as one of the foremost influences in the training of our young people along lines of American idealism.

Specifically, the American Red Cross, in the past three years alone, has been the agency of relief in 310 disasters, administering, in behalf of the country, relief funds aggregating \$30,500,000. This is an average of more than one hundred disasters each year.

The tenth anniversary of the armistice this year makes it appropriate to recall that in the ten years since that event the Red Cross has handled a monthly average of 140,000 claims or requests for war veterans, and is at the height of its service for these men now, despite the years since hostilities ceased.

Its other services are less spectacular, but the American Red Cross is what its name implies—the agency of the whole people, for services which it is recognized as supremely fitted to render in their name.

Four of 'Em Got Sporty at Dubuque



This picture was taken at the interstate meeting at Dubuque last summer, when the beekeepers of Minnesota, Iowa, Wisconsin and Illinois held a joint assembly. Here we find the official bee men of four of our state educational institutions. From left to right they are: V. G. Milum of the University of Illinois, Prof. H. F. Wilson of the University of Wisconsin, Prof. Francis Jager of the Minnesota University, and Prof. F. B. Paddock of the Iowa College of Agriculture.

Setting Honey Prices

By Elmer Luebeck

The beekeepers who seem to be pleased with suggested selling prices on honey, in the American Bee Journal, crop and market page, perhaps misunderstand that they are to deduct 30 to 35 per cent from prices given, when selling to jobbers.

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On sixty-pound cans in carlots, price list gives 9 cents to 10 cents per pound. When we deduct 30 to 35 per cent from list price and sell to jobbers the price would figure about 6 to 6½ cents per pound.

Can a beekeeper produce honey for that price and keep in the business? When the retail price on honey in small containers is from 40 to 45 cents per pound, do you realize that the percentage of difference is about 250 to 550 per cent? Sure the jobber will say it is not all clear profit. The beekeeper knows that, but the jobbers should know that the price which they offer is not all clear profit either. Every time the jobber's price is lowered some more beekeepers are forced to sell to retailers or direct to consumers, and usually at prices which take trade away from jobbers.

Why not have set prices—jobber's prices, wholesale prices, and retail prices that are favorable to beckeepers and jobbers? In return the jobber could protect the beekeeper by both having the same wholesale and retail prices.

The beekeeper should say what he must have for his honey, for no one but the beekeeper knows what it costs to produce the honey. This price should be jobber's price.

The jobber may say he knows best what it is worth, but we want sound figures, for too often jobbers' prices are far below the cost of production.

The jobbers should say what they must have to put up the honey in suitable containers, etc., for the retailer. This figure should be added to the jobber's price which he paid for the honey, and the sum should be the wholesale price.

Add 25 to 30 per cent to the wholesale price and this price should be the retail price. Keep the same prices throughout the year and the public will soon know that it can buy today as reasonable as later, and more honey will be used.

Let all who make their living on the sales of honey be friends and work together for better conditions for one another, and we will then be on the road to success.

(Mr. Luebeck's criticisms of the crop and market page are well taken. There should be more distinction between retail, wholesale and jobbing

prices. In the crop page, the prices for carlots are considered as jobbing, as honey is never sold in a retail way in this quantity.

When it comes to getting an agreement between the beekeeper, the jobber, the retailer and the consumer as to just what should be charged for honey, this is a different matter. Buyers of honey are going to buy as cheaply as they can and in many instances are going to profit by the indifferent producer who is willing to sacrifice honey, even white honey this year, at a price of 6 or 6 ½ cents f. o. b. his shipping station.

Needless to say, when there are sufficient of these to form any large quantity it is bound to affect the ultimate selling price at which the jobber offers honey.

As to Luebeck's suggestion of getting together and everyone getting a living wage, this is, of course, the only way, and would be nearer following the Golden Rule. However, getting all of these people together, scattered as they are, is another proposition.—Editor.)

To Avoid the First Sting

Whenever bees are inclined to be cross, or have been unduly disturbed due to robbing or taking off honey, transferring, etc., never light your smoker on going into the yard before putting on your veil; never take off the veil until you have disposed of the smoker. The odor of the smoker causes the otherwise harmless bees, whose keenest sense is smell, to recognize you as their plaguer and quickly bring about your head a swarm of angry, stinging bees.

T. Gorsuch, Maryland.

INTERESTING PERSONALITIES

Miss Nina Secor



For nearly forty years the name of Eugene Secor was well known to the readers of American bee publications. He was a prolific writer and it is doubtful whether any bee man of his time contributed to so many periodicals or was better known to the public at large than he. In his later years he devoted much time to the peony, and among his seedlings are several of high merit. One of the best of these was named "Nina Secor," in honor of his daughter, who was his constant companion.

Since his death in 1919 Miss Secor has carried on the work of her father. She still keeps a few bees. The Secor name has been closely allied to beekeeping for so long that she could hardly do otherwise. It is as a peony specialist, however, that she has come to be known to the world at large. A visit to her garden in June, which her father called "The Glory Month," is a red letter event to any flower lover. There one may compare dozens of the Secor originations with the best of the present day commercial varieties.



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Cellar Wintering

Do you wish to put your bees in the cellar for winter? If so, it will soon be time to attend to it.

Cellar wintering is not desirable where the winter temperature is irregular, with an occasional warm day when the bees can have a flight. But the severe winters make one wish that the bees were there. We wintered our bees in the cellar for seventeen years and quit it only after a few very mild seasons.

The proper time to put the bees away is shortly after a warm day, when the weather suddenly turns cold. Better put them in a little too early than too late. One of our Quebec friends, Mr. Verret, whose portrait was given, page 387 of our August number, keeps his bees about six months in his cellar, with very rarely any loss. Better have the bees in the cellar a little longer than run the risk of taking them in after a cold spell or of removing them before they can have a flight.

To succeed well, the colonies should be marked so as to be put back in the spot which they occupied before winter. Most people do not believe that bees will remember their location after nearly six months of confinement. But we have had the proof that some bees do remember it, and there is always more or less chance of their drifting at the time of removal if some of the bees happen to remember where their hive stood. We have had very clear evidence that they do, and have made mention of it in our October editorials.

The cellar should be dry, with a slight amount of ventilation and as little light as possible. It is better to

have the bee cellar entirely dark. There should be no jars to keep the bees disturbed. The temperature should be above 48 degrees at the height of a man's eyes, nor lower than 42 degrees. There will be, of course, a slight difference between the degree in the top row and that of the lowest row. We pile the colonies in tiers of five, the lowest being on some racks or rafters, so as not to be too close to the floor. The entrances should be left open, so that any bees which are in discomfort, from any cause, may leave and not disturb the rest of the cluster. There is usually a loss, in this way, of about a quart of bees, from a hundred colonies, during the winter. They leave the hive and fall on the floor.

If there is no great amount of moisture to cause the combs to become mouldy, enough ventilation for the bees to keep the air pure within the cluster, a sufficient amount of honey of best quality, so that there may not be any overloading of the intestines with feces, and if the temperature is kept at the proper point the bees will remain so quiet that one can hardly hear the faintest hum. As thermometers differ sometimes and cellars are not entirely alike in retaining the heat, it is well to base one's control of the temperature on the more or less noise one hears. The quieter they are, the better. A visit to the bee room, once a week, readily indicates the conditions. Our bee cellar was separated from the main cellar by a partition so arranged that we could give or reduce heat very easily. But we have seen colonies of

bees wintered in a house cellar on a shelf right above a

supply of vegetables, potatoes, turnips, apples, etc.

the food at their command is good and well ripened and the temperature uniform, no trouble will ensue. wil a 3

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It is quite important that the bees should not be confined to the hive for a number of days of cold weather, before they are taken in. When confined to the hive in cold weather, they consume more food than they would otherwise do and are more likely to suffer in confinement. That is why we always want to carry them in shortly after a warm day when they have had a flight. We also like to carry them in with as little disturbance as possible. For the carrying-in, two men can do the job better than one, and if one has a hand-barrow or stretcher, two hives may be carried in at one time, one man at each end of the stretcher, and they may be carried in so quietly that they hardly realize that anything is happening to them, especially if the day is quite cold. I have seen beekeepers use a wheelbarrow to bring the colonies to the cellar door, the result being that the bees in those colonies remained excited for twenty-four hours or more. Another beekeeper waited for a snow sufficient to drag the hives upon it sleigh fashion. I cannot approve of such methods. Beekeeping is a business of details and we cannot be too careful in our work.

The entrances of the hives may have to be closed up for the first day or two after taking them in. It may also be necessary to give cold air to the cellar until they have become quiet. Those are details that any beekeeper will readily conceive, if he wants the bees to be quiet and comfortable.

The Formaldehyde-Gas Disinfecting Method

Some time has elapsed since the publication of the articles by J. Smith and A. V. Small on the formaldehydegas treatment for American foulbrood combs, which appeared in the columns of the American Bee Journal.

The great amount of interest aroused through their publication leads us to comment on some phases of the matter. Reports coming from a high authority induce us to doubt the efficiency of the method. But some of the trials appear to have been successful

trials appear to have been successful.

Like any other method of eradication, the success of it depends on the thoroughness with which it is followed out. This is true with both the alcohol-formalin solution and the soap and water-formalin, and even with the shaking and burning of all diseased material.

The present gas method has the added factor that no one has yet given us the exact limits of time or material, or the proper gas-containing boxes, without which the treatment will fail and within which additional treatment would be unnecessary. Nor are we sure of the proper limits as concerns the penetration of sealed cells of both honey and brood. Tests of samples would indicate the need of much longer treatment for sealed brood cells and a question as to the undesirable effects of the treatment of honey.

Under those conditions a safety valve of longer exposure may be necessary. Air-tight gas-containing boxes are far superior to supers. Perhaps double treatments are advisable.

The optimist who has had complete success with the method must remember that a period of six months hardly allows sufficient time for all recurrences. For this reason we are inclined to withhold all adverse and favorable criticisms till spring examinations have been made. It will perhaps remain for some government agency, either through states or through the Bee Culture Laboratory at Washington, to make more detailed and painstaking tests, which individual beekeepers are not equipped to do. But the reports of such individual bee-

keepers, their methods and the statement of their success will be of inestimable value nevertheless, especially after

a year or more has elapsed.

The downright exponent of rigid burning will doubtless argue that we are wasting time, prolonging the era of partial infection by these methods. Considering it from the angle of general beekeeping, perhaps we are. Ruthless burning, as was done in the foot-and-mouth disease, would undoubtedly solve the problem sooner and more radically. But, as yet, no provision has been made to indemnify the individual beekeeper when his colonies become infected, if they are to be destroyed. Let us place ourselves in the position of a beekeeper with three hundred colonies or more who, either from far or near, gets the infection wholesale of his colonies after his supers are on. Is he to be criticized for avidly grasping any method which will enable him to avoid a financial failure? We can imagine the satisfaction to such a man if he can, every winter, disinfect his extracting combs, himself, thus cutting the possibility of disease to outside infection only.

By and large, in an area of small beekeepers, or with the ignorant and the careless who await the arrival of the inspector before even examining their bees, burning has its place. But the better beekeeper deserves a little more leeway. To those who wish to put their extracting combs through this treatment over winter, we urge double measures of safety and longer periods of exposure

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The above editorial having been submitted to the Bee Culture Laboratory at Washington, they inform us that they have been conducting experiments the past summer on the formaldehyde method and that they do not find on the formation and that they do not find the method sufficiently perfected to enable them to recommend it to beekeepers as entirely reliable for eradicating diseases in infected combs. Therefore, we must continue to recommend it only with the condition that they will use it experimentally and will report such successes or failures that they may have. We are all interested in this and we should help one another in making sure of what we do.

Was Cheshire Wrong?

Some of our contemporaries in Europe claim that Cheshire has not been proved wrong in his experiments and assertions on foulbrood. But, at the very best, Cheshire had only a partial truth, for he described only one foulbrood, only one cause for it, and did not dream of separating the case in two, as Dr. White did. Cheshire describes foulbrood in such a way that, in view of present knowledge, he appeared to have had both diseases under examination, but described only one microscopically. He entirely ignored the worse of the two, what we now call "American foulbrood." He accused the queen with the transmission of the disease and absolved honey. Yet, we all know at present that honey, even though the disease cannot be reproduced and cultivated in it, is the worst source of infection, evidently because it reaches the stomach of the bees and is thus easily transmitted to the

Cheshire also gave "Bacillus alvei" as the cause of Cheshire also gave "Bacillus alvei" as the cause of foulbrood, and we know today that, although it appears in European foulbrood, it only follows in the wake of "Bacillus pluton" and is called by all experimenters "a Bacillus of putrefaction." It is the Bacillus alvei which gives the odor of rotten meat to the dead brood, while the odor of brood that has died from American foulbrood or "Bacillus larvæ" of White is similar to the odor of

For this reason, such leading men as Baldensperger have changed the denominations of American foulbrood and European foulbrood to "ropy foulbrood" and "stinking foulbrood." These names are certainly more appropriate than those of "European" or "American," for both diseases appear in both worlds and those names are de-

ceiving.

We were revising the book of Langstroth when Cheshire's work appeared. We took his descriptions eagerly, for he was then ahead of the rest of the world on anatomy and diseases. But there was nothing to controvert White's discoveries and he is entitled to the credit of the progress.

Beekeepers' Tour and Conventions

The Illinois State Beekeepers' Association Bulletin published for August-September makes one wish one had been along on the annual tour of August 1-4. It is almost as enticing as the meetings reported by the bee-keepers of Romande Switzerland every season. I do not believe that there is a single association on the earth that manages to entertain its members better than this French-Swiss association. The account of their meetings is always full of enthusiasm, and it is evident that even is always full of enthusiasm, and it is evident that even an entire stranger who was not even a beekeeper would enjoy himself at those meetings, owing to the cheerfulness, the sociability, the entertainment, with banquets, music, prize giving, which are the features of those meetings. Without doubt, those who attend such tours are desirous of coming again. That is what is needed, for if we can make our beekeepers enjoy meeting each other, we will create a feeling which will lead them to active understanding of their mutual interests. Keep it up and improve it. improve it.

Those who wish to join the State Association should write to V. G. Milum, Vivarium Building, Champaign, Illinois.

Burning Colonies Suffering from American Foulbrood

The Monthly Bulletin of the Department of Agriculture for the State of California of March, 1928, is being reprinted in order to show the measures taken to eradicate foulbrood in the state. The report shows that there is a strong tendency to burn up all colonies containing

If this turns out to be the most desirable way to deal with American foulbrood, it may be well to recommend to the beekeepers the adoption of the arrangement in vogue in the French part of Switzerland, which is called Suisse-Romande. They have a beekeepers' insurance and charge one cent, five centimes, per colony. Out of these funds the losses are paid, and they are succeeding well, while taking care of their unfortunate members.

Five Thousand Samples Given Away

In this number, the reader will find a report from L. T. Floyd, apiarist for Manitoba, giving an account of how they managed to exhibit honey and give away 5,000 half-pound samples to the visitors at the Winnipeg Condon Show. Garden Show. This is a worth while action and deserves to be noticed. If more of this sort of propaganda is resorted to, the beekeepers will have no trouble in disposing of their honey crop, for it will awaken public attention and will bring about numerous sales. It is quite probable that our State Governments could help as the Provincial Government did in this instance. it over at your local meetings.

The Pellett Family Again With Us

Mr. Pellett and his family have returned from their vacation at Atlantic, Iowa, which is the locality where they used to live. Mr. Pellett was going to rest. But it does not seem very much like rest when we hear that they had as many as a hundred visitors on a single Sunday. They were evidently as popular there as they have been here. Mr. Pellett did not gain much in flesh during his vacation. He claims to have gained six ounces.

Greetings from International Meeting at Turin

We are again in receipt of a card of greetings from our beekeeping friends, this time at the International Convention of Turin. And it appears that our Canadian friend, Vaillancourt, editor of "L'Abeille," was the chair-man of that meeting. Some time, soon, we will be able to give our readers a short account of the meeting in question.

The Friendless Skunk

By Charles Hofmaster

T HAT article in the issue of last November of the American Bee Journal, "Skunks Do Their Stuff," and especially the remark of its author, Mr. Griggs, "This may be a lesson to other beekeepers," induces me to rise to the defense of that much maligned little animal. As I live right in the back country where skunks are common enough, I feel duly competent to speak my little piece.

First, let us scrutinize Mr. Griggs' statement. Having had no previous experience with skunks, he goes one summer evening after dark to his apiary and sees a skunk slide off a shelf where he had some frames with combs filled partly with honey stored. away. As it was not stated that there was any damage done, I assume there was not. Investigating further, he sees another skunk run away from the front of a hive. Again it was not stated if the bees had been roused or not, though some bees might be picked off the entrance without disturbing the colony.

Now, on this evidence, I as a jury of one, cannot do otherwise than give the skunks the benefit of doubt, which, by the rule of applied justice, is equivalent to the dismissal of the charge. I do not know if skunks eat honey, but would think they do. (The field editor of this journal, who seems to have once kept skunks for pets, could probably inform us on this point.) This is rather irrelevant, though, as a skunk cannot get into a hive, and honey should never be left around exposed.

As to the eating of bees, I have strong doubts about it. While a bird with his horny bill may safely catch a bee and crush it to death, it is hardly possible for a mammal to catch an active bee and eat it without getting stung, and there is no

animal insensitive to a bee sting. I have known bumblebee nests right where skunks had their haunts and doubtless knew of their presence, but I have never seen them bothered, although they contain some honey and lots of fat, juicy grubs, and would be easily accessible but for the stings of the bumblebees.

There is much prejudice against the skunk. The farmers have him blacklisted as a malefactor among poultry, but, checking up on such alleged depredations, one usually finds real authentic cases so few and sporadic as to make that accusation almost negligible.

Space forbids to bring more facts about the skunk, but I must state that most naturalists and others who know him well have him classified as



The skunk may meet this fate from the beekeeper's wrath, but does he deserve it?

a useful animal. At any rate, there is no need to heap more abuse on him, as he has a tough enough time to hold his own against the fur trappers, who are after him tooth and nail every season. In all the many years I have kept bees I was never bothered by any animals, the pesky mice excepted.

Only once I had a little rather humorous incident. Two years ago I kept a colony of bumblebees during the season in a little box 6x6x6 (inches, of course). This hivelet stood bravely right in the row of beehives; its heavy weight inhabitants, at one time about two hundred strong, flying unabashed to and fro like their little cousins, the bees. As an additional protection I had an old tin washpan stuck over that little hive. In the late fall the bumblebees. as is their way, began to dwindle away and by about the middle of November the last ones had disappeared. A week or so later, late one night, I heard the tin pan banging. I grabbed my flashlight and slipped out of the house. Sure enough, that little bumblebee hive was turned over, and I saw an opossum running away. I started after him and, as an opossum is not much of a runner, I soon overtook him, whereupon he turned at bay, his mouth open in a snarling expression. Anybody knowing 'possums knows this to be only a harmless bluff. I reached down, and when I touched him, he rolled over, and turning limp he "played 'possum"-i. e., pretended to be dead. I took him by the nape of the neck, lifted him up and gave him a gentle shaking. The poor 'possum probably thought his goose was cooked. But it was not. I laid him down again and retired a short distance and watched him. The animal continued a little while longer to "play 'possum," then he opened his eyes and, looking warily at me, he rolled over on his feet and backed first slowly away, then turned and scampered off, holding his head slanting sideways to enable him to keep a beady weather eye on his rear. For experiment sake I rigged up the overturned bumblebee hive again like it was before, but it was never more molested.

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My beehives are well shaded by oak and hickory trees. I often see birds catch a bee or two, but I do not go and get the gun. The number of bees caught during a season is too insignificant to warrant the killing of a single bird. They just seem to catch a bee for a taste of it once in awhile. They certainly do not care for them as a food, or otherwise the abundance and availability of such a supply would be too much of a temptation not to make use of it freely. Also it seems a bird will catch a bee only when the bees of a hive happen to be flying extraordinarily strong and noisy. Then the bird will dive down into the midst of the buzzing mass, catch one and fly back to the limbs again. There may be a sporting element in it. Who knows?

There is also a toad in my apiary.



The toad often does eat a few bees, but they are the pay he gets for eating a multitude of other insects that are injurious

I encounter it often late evenings at dusk. It is fat and looks prosperous. I have never caught him at it; in fact have never seen a toad eat bees, and I am strongly inclined to consider such stories a myth; but even if my bees did contribute to the opulence of its carcass, I would not have the heart to molest it. I consider it a guest of mine and let it go at that. The toad is well aware of its immunity; it hops only far enough aside to prevent getting stepped on and I usually pause and address a few remarks to it, to which it seems to be listening gravely, blinking its really beautiful eyes.

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Before I close this zoological composition I want to report the discovery of a great honey lover. Last winter I spent several months in the mountains of Colorado on a visit. While there I captured a porcupine and decided to keep it awhile for observation. Porcupines are strictly vegetarian; they will eat anything eatable in the shape of fruit, leaf, bark or root. My porcupine was sulky for a couple of weeks, until I found out about its sweet tooth; then with the help of honey I got it so tame inside of a week that it would come when called and follow me around. It was a most comical sight to see it sitting on its haunches, holding with one paw a stick, dipped partly in honey, and licking that honey off with great and solemn gusto. These odd-looking, shaggy creatures make real interesting and likeable pets. When tame, they make no trouble with their otherwise

dangerous spines. Oklahoma.

(In the book, "Our Back-door Neighbors," the field editor has told the story of his experiences with skunks. The evidence is all in favor of the skunk as a useful little animal, although one does, now and then, form the poultry killing habit. The natural and preferred food of skunks is mice and insects, and they are of great benefit in the destruction of noxious species. It must be admitted however that they sometimes eat bees. Like most other animals, they will eat honey when available. The service they render in other directions is sufficient to compensate for some slight depredations, and one should be slow to cause their destruction. We also agree with Mr. Hofmaster regarding toads and birds, which are welcome to make their homes with us.-F. C. P.)

Postoffice Department Allows Syrup in Mail Shipments

We have just received from the Postmaster General an extract from the Postal Bulletin dated August 18,

1928. On this date, due regulations with reference to shipment of package bees by parcel post went into effect.

As will be seen by the black-face quotations below, the main thing in the postal regulations is that it is now permitted to ship packages of bees by parcel post and have them accompanied by food consisting of sugar syrup.

We are quoting verbatim the regulations as given by the Postoffice Department so package shippers and receivers may see in detail exactly the change in regulations. This means that in the future it will not be necessary to use sugar candy in making parcel post shipments, but liquid feed may be used if desired. The regulation in full is as follows:

Order No. 8142. Paragraph 1b., Section 466, Postal Laws and Regulations, is amended to read as follows:

"Honeybees in quantities may be sent in the mails under the same conditions as are prescribed for queenbees and their attendant bees when delivery can be made to the addressee within a period of five days. If the cages are wooden, the material of which they are constructed shall not be less than three-eighths of an inch thick, and the saw cuts therein or space between slats shall not be over one-eighth of an inch wide; if wire screen is used for the sides of the cages there shall

be two thicknesses of screen, separated by slats at least three-eighths of an inch in thickness. Semi-liquid food consisting of sugar syrup inclosed in a tin can with small holes in the bottom of the can to permit of a proper leakage of the food supply may be placed in the cages. The food can shall be securely suspended in the cage with the top of the can wedged against the top of the cage. Cleats approximately one inch high shall be securely fastened on the bottom of the cages to prevent the escape therefrom of any syrup that the bees may fail to consume. Each cage shall be provided with a suitable handle and be marked on the top with the words 'This Side Up.'
Such parcels shall be transported outside of mail bags."

Harry S. New, Postmaster General.

Big Crops

So many big yields are reported in recent years that this publication is interested in learning what is the largest yield so far recorded. We are anxious to know of any big yield of honey from a single colony and also of a large average per colony for an entire apiary. Reports of such yields will be appreciated in order that we may get some information as to the frequency of such crops and the regions in which they occur.

Is He Afraid or Isn't He?



Might be a dangerous question to ask if the young lady were present. Like asking a man what his politics are during the early part of November. Bound to lead at least to controversy, if not bloodshed, when there is a difference of opinion.

The boy is Paul Mommsen, son of Secretary M. F. Mommsen of the Redwood County Bee Association, Minnesota, and the young lady is Esther Christianson, who helped Paul demonstrate the production of comb and extracted honey at the Minnesota State Fair. The spectators all experienced a real thrill when, at the end of each demonstration, Esther dumped several frames of bees on Paul's nude back.



DR. H. E. BARNARD, PRESIDENT

Opportunities Ahead

During the state and county fair season, which brings together every fall the best of the farm crops of the whole country, honey was displayed more successfully than ever before. The exhibit at the Indiana State Fair prepared by C. O. Yost, Apiarist of the State Conservation Department, attracted nation-wide attention. The Foods and Marketing Agent of the state of Florida, knowing of the beauty and value of the exhibit, wrote to American Honey Institute for suggestions for a similar exhibit at the Florida State Fair. In writing of the possibilities of making a honey exhibit, and in this way stimulating an interest in Florida honey, she says:

"I am also asking the County Home Demonstration Agents at our annual conference, beginning the first week in October to work both on the production and utilization of honey this coming year. I am wondering if American Honey Institute would feel disposed to offer some kind of award to the Home Demonstration Club girl making the best record for the year, grading her on quality and extent of work done with her bees-the story submitted, etc. I would be glad to work out a definite procedure if you are interested. Any award from twenty-five dollars to a trip to the 4-H Club Congress held in Washington each June, I am sure, would prove to be a most valu-

tion of honey in Florida."

The suggestion that Home Demonstration Club girls may extend the splendid work they have done in canning fruits and vegetables and baking bread and cakes to developing new and better uses for honey may point a way by which the honey industry can cooperate with the state departments devoted to stimulating the larger use of farm products.

able and interesting stimulus towards

the further production and utiliza-

Honey's Place in the Home

No matter how far the business of preparing and serving foods is developed by bakers and restaurants, the kitchen and dining room will continue to be close to the heart of every home. In thousands of classrooms home economic teachers are gathering the girls who will soon

be managing their own homes and teaching them how to prepare and serve palatable and nutritious meals. Home economics has been an important branch of the education of our girls for many years, but until recently it has not been enthusiastically studied. Conditions are changing, however, and the girls who are working in the kitchen laboratories are finding more interest in the preparation of food and in the study of its nutritive values than ever before.

American Honey Institute has brought the importance of honey as a food to the attention of heads of home economic departments of many schools and universities. One dean of women writes the Institute that she will be very glad to receive publications and bulletins in regard to the use of honey. In answering our inquiry as to whether or not her department was doing special work with honey, she said that she had, in the past, developed formulas for honey and nut preparations with different flavorings, such as candied orange and grapefruit peel, cocoanut, and dried ground fruits, in making a filling for plain sugar wafers. She offers the service of her graduate students, and students of experimental cookery, in developing new recipes in which honey is an ingredient, and confirms the belief of every beekeeper in the importance of his product. In a closing statement she says: "I think there is a place in the American home diet for a large use of honey as a sweetening agent."

An Argosy of Sweetness

Jane Eddington runs a daily column in the Chicago Tribune which she calls the Tribune Cook Book. Miss Eddington is interested in American Honey Institute and in her column she recently discussed modern methods for selling honey in so delightful a way that every reader must have decided before he reached the closing paragraph that any food which could be glorified as Jane Edding did was something to be sought for. After discussing the highly sanitary way in which honey is now displayed, and the perfect package in which it is wrapped, she said: "And I sailed away with my argosy of sweetness, happy indeed to have seen this bit of perfect work

and knowing that in eating that honey the thought of that care would be a fillip to digestion. Digestion is work, and I welcome anything that makes it easier and pleasanter work.

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"Perhaps the honey masters-for there are honey masters as there are orange masters, prune masters, etc. -had something to do with this great advance over ordinary honey selling. If they did not, they should take heed to such a superlatively good example and hold it up everywhere as a model. Honey is a beautiful product, a nine-day wonder among the foods of man, whether it gets stored on Hymettus or in your back-yard beehive. Remember that it started as nectar, the nectar of the blossoms of plants, and nectar is one of the loftiest or excelsis words of the world."

Broadcasting Honey

The radio carries its message into millions of homes. In the early days musical programs were broadcast almost exclusively. Later the practicability of using the radio to tell the story of football and baseball games was appreciated, and now we are carrying on political campaigns through the ether. The possibilities of using the radio service to develop better nutritional habits are growing and American Honey Institute has had several opportunities to tell the story of honey to radio listeners. This it has done by preparing a series of their short radio talks, which are already being used at the state broadcasting stations of Missouri, Wisconsin and Pennsylvania.

George A. Stuart, acting director of the Bureau of Markets of Pennsylvania, has had copies of the radio talks made for the men in charge of bee work in Pennsylvania, and has asked them to broadcast the stories as often as possible and over as many stations as are available. The Institute has other interesting material concerning which it will gladly furnish special lecturers on food topics and the operators of radio stations.

Buy Good Honey

The bakers have just had their annual convention. They talked about increasing bread sales by intelligent advertising, and they discussed many plans for promoting a larger interest in baked foods; but the keynote of all the discussions, and the final conclusion always reached, was that a greater interest in bakery goods could only be aroused by the use of better materials. The bakers' journals following the convention are stressing the importance of materials, and Bakers Weekly uses this sound logic as the basis of an excellent article on spice bread specialties in which the selection of materials is given first place in the development of formulas. The editor says:

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"In placing these cakes before you, we cannot refrain from a few words about the selection of materials for their production. Not that there is anything intricate in buying good materials, but there is much in selecting those materials that lend flavor and richness to the finished cake, and in this care must be exercised.

"If you buy honey, buy good honey, not honeydew honey.

"While there is a variety in the makeup of this type of cake, there is at the same time only two classes, known as fine and common, the difference being not so great as the distinction 'fine' and 'common' would imply. The common is usually a mixture of honey and molasses, while the fine is straight honey, in most cases."

It is interesting to note the stress laid upon the use of good honey, and to see the honey-made products placed in a class by themselves—not "common" cakes, but "fine" cakes.

Toothsome and Wholesome

After all, even in the stress of a political campaign, we must recognize the fact that the most important thing for society is our splendid crop of healthy children. And our chief job as a nation is to keep them healthy in mind and body. The Philadelphia Child Health Society, in a pamphlet called "Food, Teeth and Health," classifies the foods children from six to sixteen years of age should use in building strong teeth. This information has been reproduced in a striking chart by the National Dairy Council.

The honey industry will gladly note that the use of natural sugars is urged at least once a day, and honey is placed in the picture beside a plate of figs as a most desirable food for the teeth.

Honey Publicity

In a recent issue of the Chicago Tribune, Frank Ridgway devotes half a column to the merits of honey and its ability to absorb moisture to the point of killing any organisms with which it may come in contact. The fact that germs cannot live in honey is just coming to public attention, and this fact alone will do much to popularize the product once it becomes generally known.

Several other publications have

Several other publications have commented on this peculiar property of honey, a result of an interview recently given out by Dr. E. F. Phillips of Cornell University.

Odds and Ends from Abroad

By Annie D. Betts

"Bienen-Vater" (Austria, July), quoting from a German paper, reports the loss of an entire apiary in Baden, due to the owner feeding corn sugar to the bees in the fall. It appears that the syrup was taken down and stored, but then granulated very rapidly. In crystallizing, it increased in bulk (due to the method of its manufacture). The cells of the combs, as also the bodies of those bees which had eaten it, were in consequence stretched to the bursting point, with disastrous results.

"Die Deutsche Bienenzucht" (Germany, July), contains an article by Herr A. Ratz, of Jena, on the use of the loose sheet of tarred or varnished paper which is commonly placed on the bottom board of German hives in winter. The majority of these hives, being designed for use in bee houses, are opened and manipulated from behind, so that it is easy to push the sheet under the frames and to withdraw it for inspection without dis-turbing the cluster. The rubbish found on it tells the beekeeper a great deal about the state of the colony. The number and appearance of the dead bees indicates whether all is well with the health of the stock; and if not, what is probably the matter. Abnormally shrunken abdomens suggest starvation; swollen bodies indicate dysentery. (It would also be easy, using these sheets, to get early warning of the presence of an adult bee disease, by submitting the corpses to microscopical examination.) The number and length of the deposits of wax fragments and the like inform the beekeeper of the size and position of the cluster. The presence of white crystals shows that the bees have reached some granulated stores; and the finding of eggs proves that the queen has begun laying. Drops of honey (which bees do not sprinkle about for no purpose, as the author remarks), and bits of mildewed pollen indicate that all is not well with the stores, or that damp has penetrated the hive. Incidentally, the deposit on the paper, by showing how far the consumption of stores has gone, tells the beekeeper whether there is any danger of a shortage (provided that he knows how much honey was in the hive at the beginning of winter, and its position in the combs).

The same journal (September), under the heading "Cheap Hives," publishes an article by Herr W. Mauer describing a composition which can be used to cast hives in a mould, and might doubtless be applied to other

purposes about the apiary and home. The ingredients are equal weights of cement and wood-wool (planer shavings). The coarser the shavings, the lighter the resulting composition. The cement must be mixed thin, enough water being added to make it of the consistency of oil paint. The shavings are wetted, then dipped in the cement and the superfluity squeezed out. They are then rammed well down into the mould. This, which is of wood, must be painted and thoroughly oiled before use, else the mixture will stick to it. After four days the mould can be taken apart and the surface of the work painted over with a whitewash brush dipped first in water and then in plaster of paris, to fill up the surface pores. If desired, strips of wood can be anchored in place in the work, by means of nails or wire, when casting. The composition can be sawn, and is of about the same weight as wood. The hands of the operator should be smeared with vaseline before beginning the dipping process, else unpleasant burns will result.

In a note on foreign honey "Die Bienenpflege" (Germany, September) me..tions the important bee business run at one time by the Bavarian mission station (Franciscan monks) at San Pablo, Chile. A hundred years ago this community owned some thirty-five hundred colonies. The remnant—about two hundred stocks—were sold recently to a German colonist.

"Leipziger Bienen-Zeitung" (Germany, September) notes the possibility of an increase in price of the German standard honey jar, due to increases in the cost of coal and of rail transport rates. It is hoped, however, that the rise in price may be avoided. This jar is of a squat form, about as high as wide, convenient to clean and to use. It has a screw cap, and is sealed, when filled, with the label of the associa-Light shipping cases, lined with corrugated paper and containing fifty jars, are, it appears, coming much into use for sending out the jars from the factory.

"De Imker" (Holland, August) reports that the big bee market at Veenendaal was held this year on July 10. The total number of colonies offered for sale was 1006, the largest seller bringing 115 and the largest purchaser taking 190. Prices ranged from 3.50 to 5.50 florins (\$1.40 to \$2.20).

"Maandschrift voor Bijenteelt" (Holland, August) describes a curi-

ous case where a queen, reared in 1926, having been perfectly normal in 1927 and having produced in that year large numbers of drones, appeared in 1928 to have lost entirely the power of laying drone eggs. The editor, Joh. A. Joustra, her owner, finally placed her on nothing but drone-comb. After a few days' de-lay, she laid freely in this, but all the eggs produced workers. It is suggested that experiments should be tried, by forcing a young queen to lay many drone eggs in her first year, and then observing her subsequent behavior, in order to ascertain whether drone and worker eggs are different, and whether (if so) a queen can exhaust her supply of drone eggs, or whether the Dzierzon theory sufficiently explains the case. (It is plain that, if the queen had received an injury to the muscles of the spermatheca, preventing her from controlling the fertilization of her eggs, the result observed would not contradict the Dzierzon theory.)

"Die Schweizerische Bienen-Zeitung" (Switzerland, August) gives some statistics of Swiss beekeeping which are surprising. One family in twenty-five keeps bees; in the canton of Fribourg this rises to one in eleven, while in Basle it is only one in five hundred, there being a large urban population there. Some twothirds of the beekeepers are farmers or workers on the land. In April, 1926, there were 262,535 colonies of bees in the country; on an average, sixty-eight colonies per thousand inhabitants. Over 90 per cent of the hives are of the modern movableframe type. The yearly income amounts to about 12,000,000 francs (roughly, \$2,300). Almost all the honey is consumed in the country, the only important export being to the Dutch East Indies (3,000 to 5,000 pounds). About 300,000 pounds is imported annually, France, the United States, South and Central America supplying most of this.

Now for Bee Pasture

Prof. V. G. Milum calls our attention to the fact that the new Federal highway act provides for including the planting of trees along the improved roads. Formerly all Government appropriations for road building included only for roadbed and construction.

If the bee men are active, it would seem that the planting of trees along the U. S. highways may include such trees as are the source of honey as well as shade. Why not plant such trees as linden, tulip-tree, persimmon, hard maple, and others which yield nectar freely?

For Bigger and More Sales of Honey

By J. B. Dillon

It is a well known fact that certain newspapers in various cities in these United States have advertised and are now advertising free cooking schools, and at each session they give away market baskets filled with edibles.

Why

These same edibles are used either in the ooking or baking done by the expert who is engaged for the occasion, she laying great emphasis upon this and that article as being of such excellent quality that anyone using them can get as good results as she does.

No doubt that this is true if the cook or baker has the same skill. What we aim to show is this: After this "school" has ended, or even while it is going on, these same newspapers run advertisements of the wholesalers, jobbers or grocers that are handling the specific brand of goods, and stress the fact that, because of its sterling qualities, Mrs. So-and-So, the queen of Culinarydom, now conducting our cooking school (?), uses it.

Does she ever use or extol the grand qualifications of honey?

She does not!

Why not?

Because she has not been engaged as an advertiser of honey; neither have the newspapers. Yet if this lady should bake some cakes sweetened with honey, hot cakes smeared with honey—just any number of delectables,— and samples handed to the crowd with a demitasse, as is done with other commodities, and then a jar of it enclosed with some non-competitive edibles and given away in the basket, our sales of honey would increase.

Too expensive, you say!

Not at all. The wholesalers are only too glad to donate some of their choicest goods for advertising purposes. The gas company will loan the range and supply the gas for gas-using advertisements, and once you get folks to eat honey you will have satisfied customers and repeat orders. The writer does not recall seeing any newspaper advertisements wherein honey is mentioned, unless once in a while it is listed in a small space along with fifty or more edibles.

In addition to this, get some of the real grocers to use their show window for an all-honey display now and then, play it up and keep it up, and we will get our share of the business.

At a recent convention of honey men there was a large sign on the wall: "You can't make honey. The bees make it by extracting it from the flowers." A large streamer carrying this declaration should be stretched on the back stage where our expert is working and lecturing, and emphasis laid upon the fact that honey is the purest of pure foods and there is nothing else that has the same captivating and pleasing taste.

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It is worthy of a trial right now, the hot weather over, a fresh supply of honey on hand, and certain it is that, "Nothing ventured, nothing gained."

Pollination by Bees

The need of bees to pollenize the fruit is shown again in the report below of the New York State College of Agriculture. We have shown several times how the bringing of bees into an orchard increases the crop. We cannot repeat the lesson too often.

Ithaca, N. Y., September.—Apple growers who had conditions favoring cross-pollination of blossoms in their orchards this year have good crops, while other orchard owners, growing the same varieties under the same conditions, except that they did not provide for pollination, have little fruit, says Prof. A. J. Heinicke, of the State College of Agriculture.

The varieties which have suffered most from lack of pollen from other trees, Professor Heinicke says, are the McIntosh and Northern Spy. The difference in the yield as influenced by a lack of pollen distribution has been especially marked this year on account of the unfavorable weather during blossom time, which prevented the activity of the bees, so that self-sterile varieties like the McIntosh, which are planted in solid blocks, were not sufficiently fertilized to make a crop of apples.

Tit for Tat

Listen! Did you ever hear the story of the man who took his truck and a pocketful of money and traveled into a far state to buy bees? He came home with a truckload of packages after many days. Meanwhile, his own bees had grown strong and many of them swarmed and left home.

When the man returned home, he found some colonies storing honey. Others had been weakened because

of swarming.

Scratching his head in a puzzled way, he used his expensive bees to strengthen the colonies that had swarmed, so that they too might store honey for him. Selah!—Reporter.

Beekeepers I Have Known

By David I. Day

I HAVE known a long list of beekeepers in my day. Some of them were nationally and internationally known for their skill and wisdom and for contributions made to the sum of human bee knowledge. Thinking back over these men, I am impressed with the fact that every one of them were honest, earnest men, good citizens and good neighbors.

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Not long ago, I obtained some interesting information from one of Iowa's old reliable beekeepers. It covered most of his busy life, and most of this busy life is connected with bees and honey. He is Charles L. Ruschill, whose apiaries near Colfax, "out where the tall corn grows," produce both market honey and queens. The whole story of Ruschill is based upon a couple of dogs given to him when he was a very small boy.

These dogs were good hunters. The boy and the canines scoured the fields and along the streams. A variety of fur-bearing animals met a sad fate on these expeditions. This fur money became the foundation of a rich and interesting beekeeping life.

A part of the money was spent in purchasing a few hives of bees from a country minister's wife—just old-fashioned, fightin' black bees. A neighbor who had kept bees for twenty-five years came over to the Ruschill farm to announce that the lad had fooled away his money. He

said nobody could make anything with bees.

Mr. Ruschill's parents were wise parents, however, and refused to interfere with the son's hobby. And the hobby began to show very shortly a world of possibilities. The second chapter of Ruschill's business career centers around a catalog.

It was a catalog issued by Joseph Nysewander, one of the supply men of those days, in Des Moines. That was twenty-five years ago. But the memory of that little catalog lingers yet. It was like walking in a new Wonderland to leaf through the pages, and it is hardly too much to say that the modest little booklet changed the course of a man's life. He ordered hives, supers, comb foundation and other supplies. He sent for a book on beekeeping and by the following spring he had it virtually memorized.

The third chapter is based upon a certain golden yellow Italian queen mailed from Ohio to the farm boy in Iowa. A dollar wisely invested. The queen was introduced and the boy waited. Four or five weeks later he was overjoyed to see thousands of yellow bees flying about in front of that hive. All the neighbors came to see them and—Charles Ruschill's life was determined!

Today he sells honey from between 150 and 200 colonies, locally and in Des Moines. He sells queens to other beekeepers in many corners of the country. He has refused to become a big producer of queens—he will only handle what he can rear, personally. And with Mrs. Ruschill and the little boy and girl he lives not only a happy but a useful life.

He was the first man in his part of Iowa to keep the pure Italian bees. He has been a force for good in stressing the value and importance of aggressive marketing in appetizing containers. No man in Iowa has done







The flag and the straw skep, in the upper picture, halt motorists en route to Chicago. This is M. G. Eldred's place. Mrs. Ruschill and her two children, at the left, declare honey "sure am good." (Charles L. Ruschill, Colfax, Iowa.) "My wife, at the right, I call my silent partner, because the only time she is silent is when she is asleep, and not always then. This stand and honey shop are on Route 5, Grant Highway, thirty miles west of Chicago." (M. G. Eldred, Ontarioville, Illinois.)

more to call the attention of people to the food value and the health value of honey.

Always experimenting, there is an assurance that the contributions of Ruschill to bee lore will be greater in the future. He told me of priming queen-cells with condensed milk—and the cell-building colonies accepted them! A fellow who could think of that experiment may break loose with something else at any time, and out of experiments come progress.

Mr. Ruschill is the other fellow who is not afraid to build nice, flowing beards out of 10,000 or more bees. The first man I knew to use that stunt in advertising and otherwise is the internationally known queen man, Jay Smith, of Vincennes.

Several years ago I walked out one hot spring day to the edge of Indiana's oldest and most historic city and talked to Mr. Smith in his attractive cottage home. Across the way, General George Rogers Clark and his American backwoodsmen had looked down upon pioneer Vincennes. They captured the fort, and the Americans, instead of the Redcoats, had the flag over the town andover the whole valuable Wabash Valley as well. Mr. Smith is a good local historian and I learned something besides bees on that trip. But the Smith methods of queen rearing were of most interest. I figured then and yet that if there's any man alive who really knows bees, he is the leading Hoosier representative of the sizable family of Smiths.

Here is a man who, by his lectures in various parts of the country, by his contributions to the technical bee literature of our time, by his queens which have gone annually to every state in the Union, to Latin America, to Canada, to Europe and almost every other part of the earth—he has unquestionably made a big footprint in the sands of time.

Jay Smith is a former school teacher, a live member of a Rotary Club, and a good citizen of his city and state. He was started in the queen business through the encouragement of a state bee inspector.

Out about thirty miles from Chicago, near Ontarioville, is Merritt G. Eldred's place. Years ago he went to the country in search of health and started working with bees. His first efforts were flat failures. Then, when he could actually produce honey, he had trouble marketing the goods, so he began to sell to passersby. Now there are hundreds of roadside honey stands in the United States, but Mr. and Mrs. Eldred have a honey store—a real store, with living apartments above it.

Here they sell comb and extracted honey, honey jelly, honey cake, and

a long list of other honey specialties. Some of the customers drive fifty miles to trade at this store. The Eldreds believe in cleanliness, in attractive packages. Their honey must be good and look good.

But one of the interesting features of this business is the manner, the method of getting the rushing motorist's attention. Folks flying along at fifty miles an hour are likely to pass up even a honey store. So a great flag pole is on the premises and Old Glory waving high may be seen from afar. The white-painted hives are arranged to attract attention, and an old-fashioned straw skep halts many a car. When they stop, they become interested and buy.

The beekeeper I know best makes no claim to fame. He is only a beekeeper with forty years of golden experience, and he loves bees. That beekeeper is I. E. Ayer, my fatherin-law and the best known of the honey men of Spencer county, where Abraham Lincoln spent his boyhood days in Indiana. He never has more than seventy-five colonies. He hasn't a modern apiary. These bees are scattered around among the apple trees. But he takes care of the bees, and the bees help take care of the family.

For years Mr. Ayer lived in the hills of his county and the bees did their share in rearing a family of five children. When the boys grew up, the family decided to move to the fertile lands along the Ohio River. The first year, things went splendidly, but the second year the farm depression and bad crops united to bring failure close to the door. But that year luckily was a real

honey year and the bees kept busy. The honey revenue, running into several hundred dollars, saved the day.

Now the family farms 335 acres of fine river bottom soil; hogs, sheep and cattle graze in the pastures; the boys have both been gold medal winners in corn contests and rank among the big alfalfa producers of the county. And the bees are still busy.

Business and pleasure have called me to many parts of the United States in recent years. Wherever I have gone, there have been beekeepers. Some are in localities where the honeyflow is not the best; some are in regions where nectar is abundant. But, regardless of the natural advantages, the love of the beekeeper for his bees is uniform. That is why men who feel the charm of the work, the fascination of bee study, never desert the ship so long as there is a chance for the bees to feed themselves and yield a little surplus for the owner. And this spirit of idealism which pervades the ranks of the bee men may be responsible for the truth that they are modest, unassuming fellows who may be listed generally among the princes of earth.

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Cache County, Utah, Crop

The harvest of the honey crop in Cache county, Utah, has begun and, according to E. J. Palmer, local beekeeper, the crop throughout the county will be normal this season, although the bees were late in beginning their work, owing to the late, backward spring. However, honeyflow is exceptionally good. G. P.

Hay, Ho! - And Honey



This is the very center of the scene described by Longfellow in "Evangeline." A faintly seen mountain in the background is North Mountain, terminating in Cape Blomidon.

It might well pass also for the northern peninsula of Michigan. Alsike knee high. Ever see it that way? And so thick it tangles the feet. So sweet to the nose. Especially a beekeeper's nose.

The American Hairdresser Turns to Honey

Interesting Experiments by Mid-West Hairdresser in Building a Delighted Clientage

By Felix J. Koch

H ONEY has always been a favorite titbit of the good folks near Cincinnati. They like it on their "buckwheats," their pancakes, and the like. Honey has been much used by local confectioners, inside coatings of other sweets, but lately it is enjoying the greatest call of all, for milady has learned that honey may be used as a short cut to beauty.

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Around Cincinnati there are, on the average, two women to each man, and every woman will look her best each day, if she possibly can.

The use of honey in this way has come about as the result of interesting experiments at the Peter Strunk Beauty Shop in Cincinnati, a shop generally conceded as one of the highest type.

Strunk's shop believes in complete perfection in the art of beautifying, and one of the most valuable aids in the work of building beauty has been found to be honey—plain, every-day, across-the-counter, extracted honey. Two to three tablespoonfuls of honey per client, per treatment. You can fancy what consumption of honey that would give if copied throughout the land.

We asked Miss Magdalene Maloney, in charge of this work, to tell us how honey is used.

"May I say this first of all," she answered instantly and enthusiastically, "we do not advertise in local papers, telephone directories, by post, or even in any dignified way at all. We believe that a hair-dresser's work should be his best advertising. Let a woman's friends compliment her on her hair-dressing and she will tell them when and where she had the work done. She, herself, will advertise the place.

"As a result of this kind of publicity, which comes directly from our work, we are booked as much as a month and a half ahead at a time when business generally has not been good.

"When using the honey, an average treatment will run half an hour. The honey is used as a pack in treating the skin. The very purest, concentrated honey to be obtained is employed. The better the honey, the more it will tighten the muscles of the skin, also the more it will tighten the pores. Honey prevents sagging as no other substance. If there is no sagging, there is no wrinkling.

"As nearly as I can describe it, the actual and almost immediate effect of the honey is that the flabby parts of the muscles are called to time," Miss Maloney says. "Honey is a quick feeding food, the food putting its nutriment into the system fastest of all. This being so, honey does just what stropping the muscles would do, and even more, to attain physical perfectness."

They have worked out a method of applying honey to the minutest degree. The client's face is cleansed with cream and the face steamed. The eyes are given a witch hazel pad. Wads of the finest, softest cotton are soaked in witch hazel. Nothing is more refreshing.

This is followed by three steaming hot towels, then a cream massage applied to the wide-open pores. The steaming is repeated and the witch hazel packs applied to the eyes again.

Then comes the application of honey. It is put on here, there and everywhere by a padding or patting down process. In other words, the honey is not let rest on the client's face; instead, the attendant is constantly working the honey. She pads it down, she pats the mass and manages to work it until it resolves to a stringy taffy, and this taffy, as it is known, is pulled away. Pulling it pulls the face and the muscles behind. Thus there is given a muscular exertion as well as a complexion food whose value cannot be described.

"Remember," Miss Maloney says, "that working with honey, we are working with a perfect food. This being so, there is nothing the least whit harmful employed. There isn't a thing put on the skin but what is distinctly helpful. It is interesting to note how the skin seems to delight in absorbing honey.

"An average treatment will employ two or three tablespoonfuls of it, used on the face and neck. It would be interesting to know what the results would be were this treatment given many times daily.

ment given many times daily.

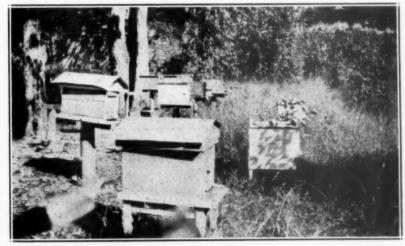
"Where a skin is distinctly sensitive, we do not play, pull, nor twitch the honey as long as we do with a skin that is strong and needs pulling. This is a matter of judgment, of course. One has to use care not to hurt the face.

"By and by, when we believe we have done enough, we remove the honey, at first very hurriedly, then with a warm towel. The honey adheres to the towel and is easily withdrawn. This is followed by an astringent of witch hazel patted down upon the face, and a cold application to close up the pores."

Death of Dr. John Rennie

Dr. John Rennie died at his residence, Selbourne, Torphias, Aberdeenshire, on August 30. It was he who, with the help of A. H. E. Wood, detected the mite which has been called Acarapis woodi, which is blamed for the existence of what is popularly known as Isle of Wight disease. Dr. Rennie was the author of several scientific works. He was 63 years old.—British Bee Journal.

Hit and Miss and Up High



Flying virgins get lost easily, especially if they have to pick the right hive out of many that look the same. Like a pre-Volstead wanderer in Baltimore, any front porch is home.

So set your nuclei hit and miss. The newlyweds will come home, because

So set your nuclei hit and miss. The newlyweds will come home, because they know where home is. Set them high and you will find less backache in a day's work.

for November, 1928

Factory Methods Applied to Honey Production

How a Minnesota Beekeeper Increased His Output and Reduced His Cost of Operation

By Frank C. Pellett



E. L. Hoffman, of Janesville, Minnesota

thereby able to care for a large number of colonies with less help than any other bee man with whom I am acquainted.

It is mommon practice in modern manufacturing concerns to discard perfectly good machinery if other machines can be found which will turn out more goods or produce them at less cost. The saving thus made very soon pays for the better ma-



The lower picture shows one of Hoffman's yards in the big hives. Part of another yard and the big honey house is shown above. This house resembles a modern factory and is fully equipped.

chine. Likewise, Hoffman has been quick to provide new equipment which saves time or labor. Because the large hives make possible a great saving in labor, Hoffman discarded Langstroth equipment for hundreds of colonies in favor of the Dadant hive. By so doing two men can care for as many bees as would require the attention of three with the old equipment. Under present conditions

this day of falling prices, keen competition and generally unsettled markets, ways and means of reducing overhead are sought in every line of industry. Where big production and low cost per unit can be secured, business will show a profit. Where small production and high costs prevail, any establishment is headed for the rocks.

We are living in a new day. Hundreds of new products compete for the consumers' dollar. Luxuries undreamed of by our grandparents are considered necessary by wage earners of today. At the same

We are living in a new day. Hundreds of new products compete for the consumers' dollar. Luxuries undreamed of by our grandparents are considered necessary by wage earners of today. At the same time products long regarded as staples are being crowded out of the picture. Honey is feeling the pressure of competition keenly. Various sugars and manufactured syrups are replacing it on the tables of too many homes. Until such a time as a better demand can be stimulated which will offer a premium for our product because of its high quality and fine flavor, production must continue on a small margin of profit.

A few beekeepers are meeting the new condition by means of expanding their scale of action and reducing their costs of operation. Among those who have been most successful in adopting modern factory methods to honey production is E. L. Hoffman, of Janesville, Minnesota. Every operation in his aniary or his honey

to honey production is E. L. Hoffman, of Janesville, Minnesota. Every operation in his apiary or his honey house is planned with an eye to the saving of labor and reducing the cost of his finished product. While Hoffman has a large investment in equipment, he is



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labor is one of the most expensive items of cost. New equipment for a thousand hives of bees costs a deal of money, but Hoffman is convinced that it pays.

For thirty years, the bee magazines have been filled with discussion of ways and means of swarm prevention and swarm control. The sum total of time spent on the part of American beekeepers in manipulations for control of swarming would

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The lower picture shows the efficiency with which the extracting equipment is arranged. Note comb rack. How handy things are. The honey runs into the big tanks in the basement, shown in the upper picture. The bench is for filling the containers. Note the belt and pulleys overhead for running extractors on floor above.

reach an enormous figure. Hoffman has adopted the big Dadant hive and has eliminated all this manipulation by means of two hive bodies for each colony during the active season.

As soon as the colonies become strong in spring, which is usually about the time of fruit bloom, he gives a second story of full-depth Dadant brood combs. With two full-depth bodies the most active queen has plenty of room for laying even though the bees store honey in the brood chambers. This big brood nest also eliminates all necessity for queen excluders, for it is a rare queen that will leave the deep combs to lay in an extracting super above. Shallow extracting supers are used.

By this simple expedient, swarming is reduced to such a point that instead of the swarming season being the businest one on the Hoffman farm it is really the time when there is the least rush. This system enables one competent man to handle a big business with inexperienced help, since there is no complicated system of manipulation necessary.

When the honeyflow is over, the bees are reduced to one-story hives again for the winter months. A large telescope cover is used which gives additional protection to the hive body as soon as the second story is removed.

It is only necessary to do a little figuring as to the time involved in any system of manipulation necessary to control swarming in the small hives in common use, to see that Hoffman makes a big saving in labor with his thousand colonies of bees by the use of the two-story big hives. In another state the most successful beekeeper I met also used a similar system of management with equal satisfaction.

In the production of extracted honey by any system, feeding at some time of the year must be done. It seems impossible to manage the bees in such a manner that sufficient natural stores will always be left in the brood chamber for the support of the colony. Hoffman manages his feeding, like his other operations, in such a manner as to reduce the necessary labor to a minimum. With both steam and hot water available in his big honey house, it was an easy matter to construct a tank for the making of sugar syrup with little labor. The syrup, of course, is only fed for the support of the bees at times when they are short of honey to carry them through until a honeyflow provides them with natural food.

In making the syrup the sugar is poured into the tank, the necessary water run in from ever-present pipes and the steam turned on to provide the heat to boil the syrup. Because of ample equipment, Hoffman is able to prepare the syrup, drive to an outyard, and feed an entire apiary within a few hours' time. The time involved in feeding all his bees sufficient to make up any shortage in food for winter is thus an unimportant item.

Extracting Plant

It seems impossible for me to describe the Hoffman extracting plant. It is one of the most extensive and perfectly arranged that I have ever seen among the hundreds of such plants visited. Any beekeeper who contemplates building a honey house for the output of two hundred or more colonies will find it money well spent to drive several hundred miles to see how this one is arranged.

In the first place everything is as clean as a housewife's kitchen, and that is a very important element in the success of any honey producer. Hoffman has metal covered tables and metal lined troughs to catch the drip in every operation from the time the honey enters the building until it is safely in the cans. With plenty of water at the turn of a faucet, floors and benches are kept clean and fresh.

The building is so arranged that the honey is unloaded from the trucks and started through the plant so as to make as little handling as possible. There is a long uncapping table with the battery of three four-frame Lewis-Markle extractors at its side. On one side the uncappers take the frames of sealed honey from the supers, remove the cappings with a steam knife and place them in the racks ready for the extractor. The

Lewis-Markle extractor can be reversed while in motion, and it is thus possible to reverse the frames so often during the extracting that the weight of the combs is equalized frequently and breakage is thus prevented. With proper care it is possible to extract new and tender combs with very little damage.

The honey goes from the extractors through a heating tank to the big settling tanks on the floor below. A row of these big tanks along one side of the room furnishes capacity sufficient to hold many tons of honey. It is heated by being pumped through coils of pipe in a hot water tank. After standing for a few hours in the settling tanks, this warm honey is in just the right condition for bottling or sealing in tin cans. Honey which is heated in this manner and sealed while it is warm is slow to granulate on the dealers' shelves.

By means of his up-to-date equipment it is possible for Hoffman with his crew to extract five or six tons

of honey in a day.

The Hoffman bees are wintered in cellars. Since the colonies number nearly one thousand, including nuclei for care of extra queens, making increase, etc., cellars of large capacity are necessary. They are deep, dry, and well insulated to insure even temperature. The temperature is kept near 50 degrees Fahrenheit. The bees are put into winter quarters early. With young queens, large clusters of young bees and ample stores of good quality, the winter losses are small.

Other Work Carried On

While beekeeping is Hoffman's principal business, he operates a onehundred-acre farm in connection with it. The farming operations are carried on in such a manner as to promote the beekeeping, but, at the same time, to make every department show a profit. A considerable acreage is devoted to alsike clover. Alsike under Minnesota conditions is a splendid source of nectar. But the alsike is grown not only for the sake of the bees, but also for a seed crop and as feed for his herd of dairy cows. With clover as a main crop, the soil of his farm is improving. Because of the large number of bees. the crop of clover seed is greatly increased and the income from the dairy is fairly constant throughout the year. It is an ideal combination for permanent success.

The location has been greatly improved in the past twenty years. When Hoffman began operations it was only an average white clover location. Not only did Hoffman grow alsike for seed himself, but he induced his neighbors to do likewise, with the result that Janesville is now an important center for clover seed

production. To insure facilities for harvesting the seed, Hoffman purchased a clover huller and operated it for many years. It is by such means that he has insured stability of his location. A dairy and seed growing neighborhood is constant, and the beekeeper need not worry for fear that no bee pasture will be available a year or two hence.

There is much of inspiration in

the success of E. L. Hoffman, for he started small and built a big business. He started with an ordinary location and developed it into one of the best, instead of seeking greener fields far away. With large apiaries and the best possible equipment, Hoffman is a good example of the opportunities that are open in honey production to the right kind of a man.

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The Father of Movable Frames

By Kent L. Pellett

Part 2

THE family was without money. Langstroth's wife accepted a position as a teacher, and Langstroth went to live with his brother-in-law at Greenfield, Massachusetts. The patent on his hive was issued October, 1852. He soon recovered his health, and with it all his passion for bees. All his life the little insects would hold a strange power over him, giving him his moments of rarest delight, and also his deepest

He threw himself into the writing of his book. He sent the manuscript as he composed it to his wife in Philadelphia, for so engrossed was he in thought that he took no pains in his handwriting, and his wife had to recopy his manuscript into a legible hand. Langstroth spoke with feeling in later years of his wife's sacrifice that winter in devoting all her after-school hours to the copying of his book. The next spring "Langstroth on the Hive and the Honeybee" was published.

It was to be acclaimed among the masterpieces of all beekeeping literature. Langstroth had transfused his being into the book. On every page could be met his artlessness, his vivid imagination, and the moralizing tone of a minister of the gospel. Langstroth depicted in the lives of his bees a drama in which the toiling little insects became almost human.

He wrote of the robber bees: "They may be termed the 'Jerry Sneaks' of their profession; and after they have followed it for some time they lose all disposition for honest pursuits and assume a hangdog look which is very peculiar. Constantly employed in creeping into small holes and daubing themselves with honey, they often lose all the bright feathers and silky plumes which once so beautifully adorned their bodies, and assume a smooth and almost black appearance, just as the hat of a thievish loafer acquires a seedy aspect." And under his pen even the most prosaic instructions gave the reader little hint that he was perusing a textbook.

Langstroth assumed no false modesty. He saw the change his movable frames would bring, had seen it when his frames had existed only as a problem, and he was not diffident in proclaiming the advantages of his hives. He said: "I hope . . . I may be permitted to put on record the prediction that movable combs will, in due season, be almost universally employed . . . " His claim might seem presumptuous. Other men had fallen into lasting ridicule by claims less radical.

He delineated the principles of the new beekeeping. He adjured the beekeepers to quit melting their good combs and to use them again and again, for each pound of wax cost the bees twenty pounds of honey. "Give me the means of cheaply obtaining large amounts of comb and I have almost found the philosopher's stone in beekeeping." Thus he voiced the need that would bring comb foundation and the honey extractor. Bee men should keep their stocks strong, and best results were to be found in large hives. "Success in beekeeping requires that a man should be in some respects a very close imitator of Napoleon, who always aimed to have an overwhelming force at the right time and at the right place." He clearly saw the principles which underlie the use of movable frames.

For several years Langstroth's sales were small. A former parishioner of his furnished capital to manufacture the new hives, but there were no profits from the venture. Langstroth preached occasionally in a nearby parish. His income was so scant that he was hard pressed to support his family, and for six years he was separated from them except for short, infrequent meetings. Those meetings were almost the only bright moments for him in the long, gray years when he was struggling to introduce his hive, to retrieve himself financially, and often in the hardest of his struggle falling before his melancholy. Those were years of discouragement: he could not take a regular pastorate, and no sooner would he establish an apiary and give himself to it with all his fervor than the recurrence of his malady would force him to sell his bees.

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In the meantime his book was selling and many beekeepers began to use his hive. Developments in the little industry of apiculture followed each other in rapid succession. Mahin imported Italian bees in 1859. In 1860 the American Beekeepers' Convention, first gathering of American bee men, met at Cleveland. Samuel Wagner began to publish the American Bee Journal. And with the Civil War there came a big demand for honey, which pushed the industry to more rapid growth. Then Moses Quinby reported a honey crop of twenty-two thousand pounds. The extraordinary harvest caused a stir over the country, and hundreds of people became beekeepers. The tales of great success in honey production multiplied.

With this new prosperity among the beekeepers and so large an increase in their ranks, the father of movable frames should have found himself in easier circumstances. But it was otherwise. People contested his patent, claiming he had merely copied the hive of Huber or other inventors. And there was a sudden mania for inventing new hives. Every extensive beekeeper believed he should benefit humanity by patenting a hive of his own-hives which usually infringed on Langstroth's patent. And many of them wrote books with almost the very words copied from Langstroth's "Hive and Honeybee." Several new bee magazines entered the field, edited by men unversed in journalism and many almost as untaught in beekeeping. The avowed purpose of the new journals was to bring a great boon to beekeeping through patent hives or special systems of beekeeping each journal extolled. In the clamor rising among these pseudo benefactors of humanity it appeared that the man who had furnished the archetype for the multifarious designs would be forgotten, or remembered only to be assailed.

He denounced the men who were robbing him, many of whom lived in ease from the sale of bee supplies, while he did not have the money to keep his family in comfort or to bring suit against them. But at last, in 1872, he, with Mr. Otis, his partner, gathered enough funds to begin suit against the Reverend H. A. King, the most flagrant of the offenders. King, who sweetened crooked business dealings with assumption of ministerial piety to make the bitterness of them unapparent, gave suave declarations of his respect for Langstroth. He regretted, he said, the Reverend Langstroth's poverty, and this litigation against a minister of the gospel pained him. Yet he felt it his duty to the bee men of America to prove Langstroth was in error. He claimed that Langstroth's hives were similar to those used in Europe for many years. King asked for a reprieve to go to Europe and obtain information about European inven-

The reprieve was granted. King scarcely realized the delicacy of his situation. He was branded a thief if he did not prove that Langstroth's patent was antedated by other hives; and if he did prove Langstroth a plagiarizer, he proved himself no less one, for his hive would also be antedated. But the latter inference was not so apparent, perhaps not perceived even by himself. He returned from Europe proclaiming that he had the proof. Every one of the features of Langstroth's hive had been in use in Europe before the patent was issued, he said.

Langstroth had a defender, however, who knew something of European beekeeping. Charles Dadant wrote to several of the bee magazines, telling the very real differences between Langstroth's hive and the European hives - differences which had caused his hive to succeed while the others had failed.

The suit was never to be concluded. Langstroth was not a fighter or a business man, and the unpleasant litigation with King grated on his sensitive nature and engendered a prolonged attack of his head trouble. He could not talk of the suit or of other bee matters, or even receive visitors, but he shut himself up in his room and diverted his mind from distraction by making chess prob-

During his illness he again had to dispose of his entire apiary to pay his expenses. Then both his partner, Otis, and his wife died. He emerged from his mental depression a broken man, too sick at heart to push further the contest with King, who thereafter sold his hives unhampered. European editors, learning that Langstroth had dropped his suit with King, concluded that he was an imposter. Some American editors were inclined to the same viewpoint.

In the meantime, the beekeeping industry was moving forward. Movable frames spread nation wide, and in their wake went thin yellow sheets of comb foundation and the honey extractor, which threw out the golden liquid from the combs. But Langstroth passed into old age reaping almost no benefit from all this development made possible by his brain. He spent his old age with his daughter, always in need. Whatever money did come into his hands he spent lavishly, for he had little

understanding of the practical. And to his last days he was never free from his melancholia for many months at a time.

Yet he was not entirely unhappy. His book went through repeated editions, and people became increasingly appreciative of his work. At last the clouds of contention were clearing, to reveal him the true founder of American beekeeping. When untroubled by melancholia, he felt relieved of a heavy burden, and his spirits became as sprightly as they had been depressed. When in his happy moods he sometimes attended beekeepers' conventions and found himself always the center of attention. His sprightly humor, his intense love of bees, the clear flow of his conversation, the very artlessness of his ways drew all men to him. If this kindly old preacher was in the hotel lobby during after-convention hours, bee men did not go to bed until late, and they arose early in the morning lest they miss a few minutes of his inimitable company.

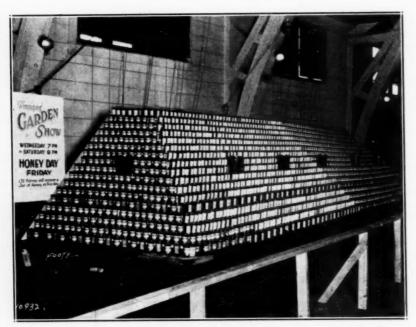
Yet, he carried men with him as effectively in his more serious moods. Once, in a convention at Toronto, he mentioned with feeling how his life had been broken into segments by his affliction, yet he did not question the goodness of God, who had a purpose in the crosses He gave His children to bear. The hearts of all were touched, and at the conclusion of his address one of the beekeepers arose and spoke to the assemblage. "We have the privilege of looking into the face of an honest man," he said. "What a great privilege we all esteem it to be. I believe that you all feel as I do. Let us join in singing the Doxology."

Fervently the group sang the Doxology, probably for the first time in the Council Chamber, where the convention was held, perhaps for the first time in a beekeepers' conven-

During Langstroth's last years bee men raised several subscriptions to show their appreciation of his work and to relieve him from his want. It hurt the inventor's pride, for he felt himself the object of charity. he was pleased at the love the beekeepers held for him and their tardy acknowledgment of his great achievements.

The last weeks of his life were free from his mental trouble. He returned happily from a beekeepers' meeting where he had been idolized, and, although a little weak from his trip, the eighty-five-year-old man began to prepare a sermon for the next Sunday. He was to assist at church in communion. He still lacked strength on Sunday morning, but he determined to give his sermon. The

(Continued on page 569)



Thirty-five hundred jars on two tables, 8x16 feet. To accommodate the 5,000 jars would have taken a third table

Manitoba Beekeepers' Association Holds Successful "Honey Day"

By L. T. Floyd

O'N August 24, 1928, the Manitoba Beekeepers' Association held its second "Honey Day" at the Winnipeg Garden Show.

Its first effort of this kind was in 1926 and proved so successful that we were urged to repeat in 1928. The final decision to act was not made until exactly one week before the exhibit was staged. A hurry-up call was made to our local association secretaries over the long distance telephone. The Vice-President of our association, Mr. J. D. McGregor, of Brandon, contributed half a ton, and by an assessment of a ten-pound pail each on the members of the local associations, by their secretaries, the honey was all delivered on time and sufficient to make five thousand half-pound samples.

The Manitoba Horticultural Association, under whose auspices the show was held, issued tickets for the honey along with each admission ticket. The aim of the Manitoba Horticultural Association was to increase the attendance at the show, while the aim of the honey producers was to place a large number of samples in the hands of the public and get them talking honey at the beginning of the marketing season. The daily papers gave it wide publicity.

We made a change this time in the labelling, in that we allowed the contributors to use their own labels. Honey from the local associations was mostly marked with a general association label prepared especially for the occasion. The results noted so far are as follows: The attendance at the show on this, the third day, when the flowers were pretty well spent, was three times greater than any other day.

Immediately following the show, Mr. McGregor disposed of his entire crop of honey (two carloads) to one of the large department stores. The general sale and demand for honey was quickened perceptibly.

One of our large pickle and syrup manufacturers, in whose establishment we bottled the exhibit, has since gone into the bottling of honey, and as he has a force of salesmen covering western Canada, this is no small item.

The wholesale grocery and other trade papers have given our work more publicity than for a long time.

Altogether it did not cost anyone very much. The Provincial Government supplied the containers, the Beekeepers' Association most of the labels, and the honey producers the honey.

We had plenty of honey; the samples were declared to be generous in size. Four thousand samples went out on "Honey Day." Continuing on Saturday, the closing day of the show, we gave away the balance, finishing about 9 o'clock in the evening. At one time, about 8 o'clock in the evening, the Rink, in which the show was held, was crowded to capacity, and it kept three attendants busy taking the tickets and passing out the samples.

Peaks and Hollows in Honey Sales

In the last issue of Gleanings, Natt N. Dodge brings out some interesting points in the so-called seasonal demand for honey. The graph which he gives shows that the peak months for honey sales are November and March. In the same issue a similar graph of sales compiled by Edmund Pierce, in Ohio, shows the same peak months.

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Christmas buying causes a slump, and the approach of warm weather equally affects sales at the other end. Why is it that most dealers think of honey as they do of strawberries? When the crop comes off the demand for honey becomes active, gradually reaching the November peak, becomes brisk again at the end of the season and then drops off because honey is "out of season."

Mr. Dodge says that the trouble lies primarily with the beekeeper. His sales approach is wrong. Honey should be pushed in keeping with the requirements of the buying season just as other goods. Advertise honey for Christmas, honey for Thanksgiving, honey for vacation lunches in summer, school lunches in winter. Follow the seasonal demand for food, instead of dumping all the honey on the market the minute it comes off the hive and expecting the public to supply the selling psychology which lies primarily in the hands of the producer. We will never get anywhere apparently unless we follow the lines which have been successfully developed in merchandising other foods.

Utah Beekeepers Must Register

Beekeepers of Utah were warned by Harden Bennion, Commissioner of Agriculture at Salt Lake City, recently that they must comply with the provisions of the state law requiring them to register their bee locations with the State Board of Agriculture or be liable to prosecution.

A representative of the board has been authorized to visit each county and check up on the situation, entering complaints with the county attorneys where violations are found.

Notices to this effect have been sent to beekeepers of Utah, according to Mr. Bennion.

Intensive Agriculture

They used to have a farming rule Of forty acres and a mule.

Results were won by later men With forty square feet and a hen.

And nowadays success we see With forty inches and a bee.

A Few Observations in Michigan

By M. G. Dadant

DURING the past summer, the writer, with his family, had the pleasure and opportunity of visiting Michigan in company with Mr. and Mrs. A. G. Woodman, and incidentally of seeing some of the beekeeping possibilities and the progress of that state. A number of items, I believe, are of sufficient importance to mention in this short article.

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In the first place, we could not help but note the close cooperation between fruit growers and beekeepers in Michigan and the rapid strides that bees are going to make in the wonderful fruit sections of that state. Recommendations of the Horticultural Department of the Michigan State College to the fruit growers are to the effect that they should have at least one colony per acre in their bearing orchards for proper fertilization.

In view of the fact that the department had such wonderful success in their recommendations on spraying fruit trees, there is no doubt but that their recommendations on pollination will also be followed.

As a short explanation of their progress in spraying, one of the first diseases encountered was the cherry shot hole fungus. The shot hole fungus attacks the leaves of the cherry tree, and, unless spraying is done at exactly the right time, the leaves eventually wither and die and the fruit also becomes withered and almost worthless.

The department has plans whereby they wire instructions to every county in Michigan advising the exact date on which such spray should be applied for destruction of the shot hole fungus. In fact, the recommendations, when closely followed, have resulted in the complete eradication of this disease, whereas neighboring orchards not so sprayed, or sprayed a little too late or too early, have suffered almost complete loss of the present crop and a very bad injury to the tree itself.

The Horticultural Department has been, during the past season, conducting "check plots" in several of the commercial orchards, to show the difference in pollination where bees have been excluded and where sufficient number of bees have been placed in the orchards. The results are conclusive.

We learned of one large firm, the Roach Orchards, at Hart, Michigan, who were so thoroughly impressed with the desirability of proper pollination that two hundred colonies of bees were rented for their orchards at two dollars per colony, and they

furnished trucks for transporting the bees both to and from the orchards.

The crop harvested from these colonies averaged about one super of extracted honey, mostly from cherry blossoms. Mr. M. F. Freeman, of Mesick, who handled these colonies, stated he never saw honey come in so fast as it did during the full bloom of the cherry trees.

Undoubtedly other fruit men are going to profit by the experience of the fruit growers who practiced pollination this year through bees, and will either rent colonies in succeeding years or provide pollination themselves with apiaries scattered through the orchards.

During our trip we had the pleasure of visiting the large Cherry Home Orchard at Suttons Bay, Wisconsin, claimed to be the largest cherry orchard in the world. They have 260 acres of all Montmorency cherries, in one block, in which the estimated production is 650,000

Another item of interest was the rapid spread of sweet clover throughout Michigan, and most especially the southern half of the southern peninsula. We learned that a number of beekeepers who had previously moved to the northern end of the peninsula to get the alsike, milkweed and raspberry, and other flows, were in many instances returning to their old location from the fact that sweet clover was now furnishing an additional crop and guaranteeing surplus honey, whereas formerly the crop

realization on the part of Michigan

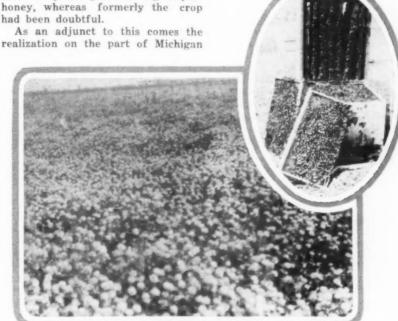
beekeepers that it is more or less unpleasant to have buckwheat honey yield a surplus, since it now becomes mixed with the lighter sweet clover honey, whose plant blooms at the same time. Sweet clover is becoming as valuable a crop to the beekeeper of the southern peninsula of Michigan as the alsike already is to his northern peninsula brother.

The writer had the pleasure also of traversing the northern peninsula from east to west. Here is no overstocking of bees. Hundreds of acres of wild raspberry and other plants were encountered, with scarcely a bee to gather the honey. Of course, the season is short here and the plants not as abundant as in the southern section, so one would not expect a large surplus.

It is up here that winter protection is needed most positively. The snowfall during last winter ranged as high in some sections as 130 inches, and the confinement of bees in the apiary of Mr. T. J. Davis, of Rudyard, near the southern end of the peninsula, has been as high as 160 days.

Mr. Davis is located in the center of what is known as the northern peninsula "clover lands," or land which has been cleared out of the cut-over country and is now yielding bountiful crops of alsike clover and ordinary farmers' crops.

We are showing a picture of an alsike clover field in reach of Mr. Davis' bees, and also a photograph of a colony of bees the day after it



The oval shows a colony of bees just out of the cellar at Tom Davis', in the Upper Peninsula of Michigan. (First thought it a colony ready to swarm.) But these bees will be ready for fields of alsike like the above. (Yes, it's in the Peninsula, too.)

had been moved from the cellar, after having been confined to the cellar for 149 days.

Mr. Davis, the reader will notice, wintered his colonies in double-story hives, but intends to discontinue this as rapidly as possible, owing to the fact that it requires such a large amount of storage and colonies are difficult to handle on account of the bulkiness.

Besides the field meeting at Rudyard, the writer had the pleasure of visiting also at the apiary of James Hilbert, at Traverse City, where another field meeting was held. As our readers will no doubt recall. Mr. Hilbert is the man who produces comb honey in half-depth frames, but instead of marketing them in this manner, cuts the combs out by means of a method of his own into squares the size of a comb honey section. These are wrapped in cellophane paper, placed in a comb honey carton and shipped to a Chicago market. He states he has no difficulty in disposing of his maximum production to one agency in Chicago, who in turn claim they can handle all they can get of this style of honey.

All in all, our twelve days' stay in Michigan was wonderfully well worth while, both from pleasure and from a business standpoint. We thank our gracious hosts, the Woodmans, for not only the pleasure, but also the wonderful amount of information concerning the natural beauties and the resources of this great state. One needs only a trip over the northern peninsula to realize that there is still plenty of uncultivated land in the country, and for many years, at least, the United States will not suffer from over-population.

Honey Pumps Again

I wonder who has seen three Simplicity extractors in one hookup? One of them is used for drving cappings only. When this third one was installed, the honey pump could not carry all the honey, so it was speeded Result? Froth-froth-frothon all the settling tanks-tubfuls of it. Perhaps part of the trouble is caused because the honey from the extractors goes directly to the pump, where all the bits of wax become chewed and ground up with the honey.

I wonder if the honey from extractors should not be run into a ten- or fifteen-can straining and settling tank and the coarsest of the wax removed before the honey goes to the pump? And how about using a larger pump at lower speed, not running it all the time? Who knows? Reporter.

(Don't use any pump at all. No need .- Editor.)

Crane Uses Up-to-Date Advertising

We are in receipt of two little circulars put out by J. E. Crane & Son, Middlebury, Vermont, advertising Crane honey. They also use a very excellent letterhead, giving their name and address and a picture of a bee just below the printing. The



The front of Crane's folder about honey.

Just the right size for an envelope

bee is in orange, and flying across the page, very effective.

The two little circulars have several points of interest. One is black and green on buff stock, the green showing a bee on a clover blossom, and the printing advertising "Crane Honey Cream, pure unheated honey milled to creamy consistency, white and flavory." Note the language. Poetic language is a part of honey advertising; in fact the folder goes on to describe the creamed product and to give endorsements of it. The layout and handling of the circular are especially attractive and indicate the work of an experienced advertising hand.

The other little circular is about Crane honey. It shows a picture of a tousle-headed youngster with a broad grin, biting into a slice of bread and honey. At least we assume there is honey on the bread. It is hard to describe in a picture. The title of the booklet is, "Raise Them on Honey, the Complete Food-Sweet." Here, as with the other

circular, the handling of the material is expert. It gives many facts about honey as a food, with quotations from authoritative sources such as Dr. Arnold Lorand's book, "Old Age Deferred," where Dr. Lorand states "Honey is easily digested and assimilated; it is the best sweet food. It has excellent food qualities when combined with other foods like milk, cereals and fruit."

The inside title interests us: "Nature's Beneficent Sweet for Health and Happiness." In little boxes set off by themselves, quotations from users are given, and little recipes for

It is a fine piece of work and Crane & Son are to be congratulated on being among the first to use advertising of this sort.

Picture of the Oldtimers

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Prof. R. H. Kelty of the Michigan Agricultural College has recently had made a reproduction of a composite photo of ninety-nine of the leading beekeepers of a generation ago. Such men as Adam Grimm, Samuel Wagner, Moses Quinby and L. L. Langstroth are included in the group. There are a number whose names are not familiar to the younger generation except those who are readers of the dusty files of old magazines. There is much of historical interest in this old picture, and any beekeeper might well give it a place among his souvenirs. T. F. Bingham, James Heddon, J. Van Deusen and J. Vandervort were prominent figures in days that are past, and it is interesting to see what manner of men they appeared to be. The picture is about 9x11 inches in size and sells for 75 cents. Any funds received from its sale will be devoted to the purchase of books for the A. J. Cook Memorial Library of the Michigan State College. Prof. Cook appears very near the center of the group. Orders for copies of the picture should be sent direct to Prof. R. H. Kelty, East Lansing, Michigan.

United States Principal Destination of Chilean Beeswax

Chile is not very important as a source of supply of beeswax, according to statistics from Vice Consul E. J. Sparks, Valparaiso, Chile. In 1922 a total of 258,876 pounds was exported from Chile, 195,524 coming to the United States. In 1926 a total of 163,606 pounds was exported, of which 112,576 pounds came here.

Chile's export of beeswax for the first quarter of 1928 was 36,000, against 25,000 pounds for the first quarter of 1927.

Honey in Fancy and in Fact

By P. Mabel Nelson, Ph. D., Foods and Nutrition Department, Iowa State College, Ames, Iowa

"Who in his pocket hath no money, In his mouth he must have honey."

H ONEY, with its romantic appeal, is today, as it was of old, the symbol of material abundance, prosperity and happiness. Honey as symbolic of happiness has been perpetuated in the term "honeymoon," used to designate the period thought of as the happiest time in man's life. The origin of the term honeymoon is attributed to practices that were the vogue among the ancients in celebrating weddings.

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Eichler (1) and Hackwood (2) tell us that among the northern nations of Europe, in ancient times, it was the custom for newly married couples to drink metheglin, or mead, a kind of wine made from honey, for a period of thirty days after marriage. Antiquarians say that from this custom grew the term "honey month," or "honeymoon." Metheglin, or mead, was made by fermenting the liquor obtained by boiling in water the honeycombs from which the honey had been drained.

Honey or other sweet things were often used in the wedding ceremonies, in order to make the marriage happy. Westermark (3) tells us that among the Ruthenians of Bukovina the face of the bride is smeared with honey, or sugar is thrown into her bosom, so that her future shall be sweet. In Bulgaria one of the women anoints the bridegroom's face with honey, saying, "Be fond of each other as the bees are fond of the honey."

In Rhodes, on arriving at the new dwelling which constitutes the dowry of the bride, the husband dips his finger in a cup of honey and traces a cross over the door, while those present cry aloud, "Be good and sweet as this honey is."

In the neighborhood of Sparta, when the couple arrive at their new home, the bridegroom's mother stands waiting at the door, holding a glass of honey in her hand. From this glass the bride must drink, that the words of her lips may become sweet as honey, while the lintel of the door is smeared with the remainder, that strife may never enter in.

"In Crete, at the threshold of the bridegroom's house, a maiden receives the bride with honey and nuts mixed with sesame."

Among the Valachs of Acarnania, butter, or sometimes honey, is offered the bride, who smears the door with it, "thus indicating that her arrival will bring into the house sweetness and joy."

Speaking of the custom of the bride and the bridegroom eating together, Westermark says: "And in

certain cases some particular effect is obviously expected from the kind of food partaken of; as when in Greece the young man's mother makes the couple eat honey from the same vessel, that their marriage shall be sweet."

More familiar to us probably are the Biblical (4) references to honey; how John the Baptist "had his raiment of camel's hair, . and his meat was locusts and wild honey"; and of the land of Canaan: "For the Lord thy God bringeth thee into a good land—a land of oil, olive and honey." Again, "Buttermilk and honey shall he eat, that he may refuse the evil and choose the good," says Isaiah; and Solomon urges, "My son, eat thou honey, because it is good, and the honeycomb which is sweet to thy taste." But less frequently quoted are the following: "It is not good to eat much honey, and "The full soul loatheth an honeycomb." It is just as well to bear these observations in mind also, lest in our enthusiasm for honey we overeat of this sweet.

In the bee lore of ancient peoples medicinal powers were attributed to bees and their honey. Honey was both used as an external application and as an internal remedy. Curious ideas were promulgated by the honey enthusiasts. According to Allen (5), who has made a collection of some of the more curious practices, honey was not only "a remedy, but almost a charm." Either pure honey or honey mixed with the ashes of bees' heads, put in the eyes, was considered good for the sight. Honey mixed with dead bees dried to a powder, or with the crushed tooth of a donkey. was rubbed on heads as a cure for baldness. Honey cooked with egg and almonds and then iced with rosewater and sugar was thought good for consumption. Red rose leaves steeped in honey and water "tempereth the hot affections of the brain." Violets treated in the same way "expelleth melancholy . . . and heaviness of heart." Rice boiled in milk and honey "brings the gift of beauty." After death, "bodies may be embalmed in honey."

We are told that today in Mohammedan countries honey brings a high price because the great prophet Mohammed once said, "Honey is a remedy for all diseases." A modern writer (6) urges that we "do not fail to quote Mohammed when we advertise our honey."

There is an idea prevalent that the formic acid injected into the wound made by the sting of a bee will, if there is enough of it, cure rheumatism (7). Dr. Bob (8) tells at length of a friend, crippled with rheumatism, who was permanently benefited after he had recovered from being stung by a hive of bees.

One old saw or axiom (2) has it that "whoever wishes to preserve his health should eat, every morning before breakfast, young onions and honey." This sounds rather sensible, but is it tempting?

Another curious power attributed to honey, according to Luttinger (9) is that the eating of honey containing wax might develop resistance to tuberculosis. "This pious wish, probably based on the association of ideas between wax and the waxy capsule of the tubercle bacillus, has no scientific basis;... however, among European peasants honey enjoys a high anti-tuberculosis reputation."

Aside from these fanciful ideas associated with the use of honey, it has considerable standing in some of the European countries as being directly stimulating to the formation of hemoglobin and therefore beneficial in chlorosis and anemia. Slocum (10) quotes from "Langstroth's Honey Bee," by Dadant: "In Denmark and Hanover the treatment of chlorosis by honey is popular. The pale girls of the cities are sent to the country to take exercise and eat honey."

The most extensive experiment purporting to demonstrate the value of honey in the formation of hemo-globin is that of Frauenfelder of the Swiss Society of Beekeepers. Brunnich (11) says of Frauenfelder's experiment: "Mr. Frauenfelder, director of a sanitarium for children, made, with the assistance of his physician, a series of experiments upon the influences of honey as food. He has in his establishment children of weak constitutions or in re-convalescence. He divided them into three groups. To the first group he gave the usual food; to the second group he gave in addition to the usual food honey after a definite scheme; to the third group no honey, but medicaments and remedies for fortifying them for the appetite, etc. As control, the blood of the children under experiment was examined and the quantity of hemoglobin found, before as well as at the end of the cure. It was highly interesting to see the enormous progress of the honey group-the increase in hemoglobin threw the first and third groups in the shade; the general state of health was conspicuous. Mr. Frauenfelder gave us a great number of examples which supplied a comparison of the three groups and proved the high value of the honey cure." Because of Frauenfelder's success, Brunnich urges that honey, two tablespoons in a glass of warm milk, be given daily to the undernourished child.

Alfonsus (12) writes enthusiastically of this same experiment of Frauenfelder's: "The scheme of investigation embraced questions as to body size, weight, hemoglobin content of the blood, and breast circumference during the deepest inhalation and strongest exhalation, in which the general condition of the glands, lungs, circulatory system and also the psychic behavior to the minutest degree, were taken into consideration. The daily observation of the children likewise rendered feasible the making of a representation of their psychic interruptions.

In the eyes of the parents, the things of most value were the records of blood counts and weights. But when the doctor, besides taking as an objective the measurement of the lung capacity and enhancing of the appetite, can bring about the gradual elimination of the often endlessly multitudinous nervous symptoms, then it must be wonderingly asked how such a result was possible in this incredibly short time. Naturally honey alone is not the magician which has effected this wonderful cure, but the fresh mountain air, the complete rest and with it the intensive living in the open have essentially contributed to it."

In a later paper Alphonsus (13) attributes the hemoglobin stimulating properties of the honey to its vitamin B content and urges the abundant use of milk and honey for older persons as well as for children. He suggests using it in sweetening drinks, stating: "Honey, which contains the growth-promoting vitamin B in abundance, ought, for example, to be used for sweetening drinks, consequently everywhere replacing sugar in the coffee so indispensable to Americans." I am unable to determine his authority for the statement that honey is rich in the growth-promoting vitamin B.

Comby (14) thinks that honey, so commonly used in olden times, is now forgotten too much. He emphasizes its content of easily assimilated carbohydrates, vitamin B, calcium and iron phosphates, formic acid, and that it has laxative properties and keeps indefinitely. He refers to Alfonsus' account of the Frauenfelder experiment and recommends the use of honey in infant feeding and for older children.

Luttinger (9), who has used honey successfully in 419 cases, states that he is using it more and more extensively in marasmus, rickets, scurvy, malnutrition and other conditions in which he formerly prescribed the various sugars, cod liver oil or patent foods. There seems to be prevalent a definite conception that honey is

beneficial in the diet, but the reasons for its success are uncertain, being attributed by some to one constituent and by others to another. What is the present conception of the nutritive value of honey?

The nutritive value of any food is directly dependent upon its inherent constituents and their physiological action in the human body. The constituents found in honey are:

| Water | 17.7 | per | cent |
|---------------------|-------|-----|------|
| Sucrose | 1.9 | 99 | 77 |
| Fructose (levulose) | 40.5 | 9.9 | 99 |
| Glucose (dextrose) | 34.48 | 7.7 | 9.9 |
| Dextrin | 1.51 | 99 | 9.9 |
| Ash | .18 | 99 | 99 |
| Undetermined | 3.73 | 99 | 9.9 |

These figures are from Sherman (15) and represent the average of ninety-two analyses of normal honey. Luttinger (9) gives a more detailed analysis of the composition of the honeys used by him. His figures follow:

| Water | 17.2 | per | cen |
|---|-------|-----|-----|
| Sucrose | .40 | " | 99 |
| Levulose | 39.10 | 99 | 22 |
| Dextrose | | 2.9 | 99 |
| Dextrin | | 9 9 | 99 |
| Proteins | 1.80 | 99 | 99 |
| Formic acid | |) " | 9.9 |
| Malic acid | .30 | 99 | 22 |
| Acetic acid | .20 | 9.9 | 99 |
| Wax | .90 | 99 | 22 |
| Mineral salts (phosphoric acid, calcium, magnesium, iron, iodine, etc.) | .75 | " | 9.9 |
| Undetermined (resine bee glue (propolis) coloring matter, vola- tile oils, vitamins, | | | |
| etc.) | 3.80 | 22 | 9.9 |

From the figures presented it is readily seen that honey is essentially a solution of the two sugars, levulose and dextrose, with varying, but on the whole negligible, amounts of sucrose and with small amounts of the other water-soluble constituents mentioned. The sucrose content may run as high as 8 per cent instead of .40 and 1.9 per cent as stated. As described by Ely (16), "honey is a sort of clover-leaf of the sugars sucrose, dextrose and levulose." This conception of its composition is more fanciful than true, unless by that statement was meant that from the sucrose of the flowers there was made by the bee a new substance containing largely the two simple sugars, levulose and dextrose.

The energy value of foods is measured in terms of calories. The sugars furnish four calories per gram, or 113 calories per ounce of food. To the uninitiated, calories are an intangible method of measuring the food values, hence in a comparison with other sources of carbohydrates calories may be helpful. In a two-ounce jar of strained honey there

are 185 calories. Honey is a concentrated food, yet it is not as concentrated as cane sugar or corn sugar, because of the water it contains. The weights of some of the common carbohydrate foods which furnish energy equivalent to that found in two ounces of honey are as follows:

Weights of Carbohydrate Foods Furnishing Energy Equivalent to That of Two Ounces of Honey

| | 01 110110 | , |
|---------------|-----------|-----------------|
| | Weight | Approx. |
| Food | (ounces) | Measure |
| Honey | 2.0 | 2 tablespoons |
| Cane sugar | 1.6 | 4 tablespoons |
| Corn sugar | 1.8 | 5 tablespoons |
| Raisins | 2.0 | One-third cup |
| Dates | 2.2 | 9 dates |
| Soda crackers | 1.6 | 12 2" square |
| Shredded whe | at 1.8 | 2 biscuits |
| Almonds | 1.0 | 28 shelled |
| Apples | 13.9 | 3 1/2 med. size |
| Oranges | 18.7 | 4 med. size |
| | | |

Of greater significance than the amount of sugar found in honey is the fact that the two sugars present, levulose and fructose, are in the form known as invert, or simple sugars. The sugar of the nectar of flowers as gathered by the bee is sucrose. While it is being carried to the comb in the honey sac of the bee, there is begun an inversion of the sucrose by the enzyme diastase into the simple sugars, glucose and fructose. The inversion of the sucrose continues long after the bee has deposited the nectar in the honeycomb and by the time the honey is gathered by man only traces of the sucrose remain and a high percentage of invert or simple sugars are found.

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The enzymes in the intestines of man acting on sucrose change it to the simple sugars, glucose and fructose, in the same manner as it is changed by the enzymes of the bee. When, therefore, honey is ingested there is available a sugar which has been digested or reduced to a simplified form outside of the body and which is ready for immediate absorption into the blood stream. Such a food will furnish an immediate source of energy without further action on the part of the digestive organs. It is for this reason that honey is recommended by Luttinger (9) for use as a routine infant food wherever the sugars lactose or maltose are indicated, and in any condition of the intestinal tract where normal assimilation of starch or sugar is delayed and prompt absorption is desired.

English (17) urges its use in typhoid fever because of the disordered condition of the lower small intestine, also in crippled liver function and heart disorders and all diseases of the respiratory tract, because patients tolerate large quantities without gas formation. He has the treatment of constipation.

Honey is used by the dietition in heart cases, for tubercular patients, in fevers and in inflammatory infections. For the ordinary healthy individual the saving of the work involved in digesting the sucrose to simple sugars is probably of minor importance.

Next to the sugars, the constituent of most importance in honey is probably the protein. Luttinger (9) says of the protein of honey: "Another advantage of honey over sugar is its protein content, mainly derived from the pollen of plants. The percentage has been estimated at 1 to 5 per cent, according to its derivation. It not only adds to its nutritive value, but in cases where the infant cannot digest casein or other milk protein it may become the only available source of nitrogenous food during a critical period. That it is capable of sustaining life and building tissue may be inferred from the fact that bees ingest no other azotic food. The special honey set aside for the queen of the hive and known as royal jelly is particularly rich in pollen grains, and her extra size as well as her extraordinary vitality could be ascribed directly to this food."

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In the ash of honey there are traces of calcium, magnesium, potassium, sodium, phosphorus, chlorine, sulphur and iron. These minerals are all of them needed in tissue building, so honey is a source of good mineral, though to a limited extent. because of the limited quantity, the total amounting to less than 1 per

Virgin honey direct from the comb is acid in reaction due to the presence of organic acids such as formic. malic and acetic. These organic acids, which in some specimens of honey may run as high as 2 per cent, rarely

found it also a valuable adjunct in less than 1 per cent, act as mild stimulants and are partially responsible for the mildly laxative action of unheated honey.

> "The undetermined substances, mainly gums, propolis (bee glue), resins and other substances, probably act as roughage and together with the wax tend to increase peristalsis." (9)

> Honey is not apt to carry pathogenic or disease producing bacteria, because it is so concentrated that germs introduced into it soon die. Sackett (18) tried inoculating pure honey with a number of organisms of the typhoid colon group and found them all dead within twenty-four to forty-eight hours after inoculation. He concluded, "The longevity of the typhoid colon group in honey is very limited. The probability of honey acting as a carrier of typhoid fever and various diarrhoeal affections is very slight."

> Regarding the vitamin content of honeys, there is considerable difference of opinion. Dutcher and France (19) reported negligible amounts of vitamin B in basswood and white clover honey. They found vitamin B present in corn pollen, however, and state that traces of vitamin B may be found in the honey, due to its contamination with pollen. Pollen is carried on the body hairs and in the pollen baskets of the bee. In the hive it is moistened with nectar or diluted honey, then packed into certain cells and known as bee bread. Thus contamination of the honey with pollen is readily possible.

Faber (20) concluded that white sage comb honey has no antiscorbutic vitamin.

Smith, Hawk and Bergeim (21), after testing white clover honey, found not more than minimal amounts of the vitamins A and B in the strained honey. They found

moderate amounts of vitamin A in the comb honey. There was no vitamin C present in the white clover honey.

Luttinger (9) states of the honeys which he used: "In my own experiments, which will be reported elsewhere, I found all three vitamins in 82 per cent of the honeys examined." These data are still unpublished and do not agree with the findings of others as indicated above.

Scheunert, Schieblich and Schwanebeck (22) report having tested an imported honey, honey from basswood, and centrifuged heather honey for vitamins and that none of the honeys contained vitamins A, B or C in demonstrable quantities.

House and Nelson (23), in vitamin tests on white sweet clover honey unheated, found traces only of vitamin B and no vitamin A. In yellow colored honeycomb there was evidence of vitamin A. No vitamin A was found in a sample of very dark brown comb.

Munsell (24), of the Bureau of Home Economics, in cooperation with the Bureau of Entomology, determined the vitamins A, B, C and D of two samples of honey, one of very light color, the other of very dark color, and found no evidence of their presence. A sample of honeycomb yielded similar results. It is questionable whether the good results obtained from using honey in the diet of infants and children can be due to vitamins, since the content of vitamin is so variable.

Honey is a natural source of an easily assimilable sugar, contains the minerals desired for growth in traces and may also contain traces of vitamin B, with some vitamin A in the honeycomb. It has been successfully used for feeding infants, invalids and adults, and is a wholesome food for use as a sweetening agent.

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THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

RETURNING NUCLEUS TO ORIGINAL COLONY

1. About the last of August I started requeening operations by first making a two-frame nucleus and placing it in a mating hive. Queens were then introduced. Busy time on farm prevented placing in center of brood nest, as was intended, about ten days later; then bad weather set in and I have been waiting on weather since. The young queens now have stopped brood rearing on account of cool weather; we had a killing frost last night. Would it be safe to put this nucleus and young queen in ing on account of cool weather; we had a killing frost last night. Would it be safe to put this nucleus and young queen in center of brood nest from which it originally came that long ago, after the old queen was taken away? I do not want to take any chances on making a colony queenless at this time of year when one cannot tell for sure that there is a queen there on account of brood rearing season being over.

2. I have usually experienced much trouble from mould in brood combs in colonies packed for winter. Inner cover was left on and escape hole covered with burlap, then eight inches of packing on top and four around sides; none on bottom. Would it do to replace inner cover with a screen wire and place packing directly on top of this?

3. How can I best winter over extra queens in mating boxes?

IOWA.

Answer.—1. It is out of the question to

Answer .- 1. It is out of the question to figure on those bees being accepted as belonging still to the colony from which the nucleus came. If you unite them, you must do it as you would unite two strange colonies. You should properly kill the old queen some warm day and afterwards introduce your nucleus, after having put the young queen in a cage until the bees have become accustomed. If the old queen is killed a few days in advance, you might risk the introduction of the young queen with her bees without caging her, but there is some risk to run, owing to the lateness of the season, especially if the old colony is stronger than the nucleus, which must surely be the case.

2. Mould in brood combs during the winter is due to an insufficient amount of ventilation. We remove the honey board or oilcloth, whatever is over the combs, and put in some absorbents. It would be all right to put on a screen, as you suggest, and then place the packing directly over the brood combs. There must be plenty of chance for air at the entrance of the hive. I have known colonies to winter safely without any

bottom board at all.

3. Extra queens cannot very well be wintered, except in cages over the brood combs. I have known of four or five queens being kept thus over a queenright hive without loss. But it is not a very desirable way, for queens that are kept thus are slow to begin laying in spring, when released from their cage.

TWO TEN-FRAME HIVES FOR WINTER

Will it be advisable to pack our bees this winter in two ten-frame bodies, eight frames below and eight above, filling the two-frame space left vacant in each hive, on the north, with leaves in a burlap sack, laying the top of sack over the top frames to form an absorbent cushion and prevent dry leaves from the third story filled with leaves dropping through, leaves packed underneath with four inches and with no side packing (except, of course, the sack of leaves in the inner side as explained)?

Perhaps the above question needs some

explanation for such desire to pack. Last winter we packed with leaves underneath and straw in third super, leaving either a full super or half super filled with honey in second story as a food chamber. In the in second story as a food chamber. In the winter or spring, some time, the bees moved up and left considerable honey below. The moving of two frames above would place the honey where needed. We did no side packing and our bees came through almost 100 per cent and made a wonderful record this year. We have a heavy woods with some underbrush on the west as a wind protection, and last winter, as you know, we had over a month of awfully cold winter—constant, with ice most of the time. You may ask why we desire to change, after having such success last winter. Here is the reason: We had only six colonies and had sufficient honey for full food chambers and also sufficient inner covers to confine straw to third story. This winter we have fifty colonies and only a half dozen inner

straw to third story. This winter we have fifty colonies and only a half dozen inner covers and only an average of six extra frames of honey for the food chamber to each hive. Therefore, it means that if we packed as last year we would have fifty inner covers to buy and we have only half enough honey to fill our large food chambers. Carmel is fifteen miles north of Indianapolis, in central Indiana.

INDIANA.

Answer .- There is no need to buy inner covers for your hives. But just put your straw or leaves into a sack and fill inner part of empty upper story with it, so as to have absorbents above the cluster.

Your method of wintering is good. Of course, we prefer to have all our bees and stores in one story. That is why we use deeper frames than the regular Langstroth. This permits us to winter the bees in more compact form, since as much honey as they need is in the brood chamber. It is the same way for breeding. But, of course, you can succeed with ten-frame and even eightframe Langstroth hives, for most people do succeed. The requirement is to have your bees as snug as possible, plenty of good honey, absorbents over the top, as much packing on the sides as convenient, and shelter from the winds. In your locality, as well as in our own, you will succeed almost invariably in winter.

BROOD CAST FROM HIVE

BROOD CAST FROM HIVE

I notice young bees dead before my hives, and in one case a young queen apparently only a day or two prior to emerging. We have had extremely mild weather for nearly a month and my bees are packed in two standard ten-frame bodies with from sixty to eighty pounds of honey, Recently we have had cold nights. This dead brood looks like chilled brood. I have noticed such a condition before, but I never noticed queen brood cast out at this season of the year before. I have packed all sides of hives, except fronts, with about four inches of planer shavings. Hives face southeast. I always pack fronts in November and I remove packing from fronts of hives usually two or three weeks earlier in spring than sides and rear.

sides and rear.

With the foregoing information, can you give me some idea about the cause of a young queen at this time and why cast off? Would you say the colony is queenless? Is it likely the cell was at bottom of frame and pupe died from cold? This colony was requeened in July this year, and September 15 was last examination of brood nest. The queen was at that time laying.

PENNSYLVANIA.

Answer.-That there should be young bees dead in front of your hives is not astonishing, as it often happens, especially

in hives of two stories, that some bees find themselves away from the cluster, when a cold snap comes suddenly, and

As to the queen, this is more difficult to explain. If there was a laying queen in the hive September 15, it is likely that the laying queen is still there. However, it might be that she was killed accidentally when you opened the hive and that they tried to rear another, or perhaps reared several and the one which you found in front of the hive would then be one of the cast off ones.

In such a case, the hive may have a young queen and it is doubtful whether she could be fertilized this late in the season. So if you find the colony with a dronelaying queen in spring, that will confirm my suggestion. But as this is only a surmise, I don't think you should worry over it.

WINTERING IN AN ATTIC

. There are a few questions that occur me and which are not fully covered in books on beekeeping. The first question n regard to my idea to carry ten colonies ough winter in a large attic with one ge window which it was my intention to through winter in a large attic with one large window which it was my intention to leave open about twelve inches from the bottom and darken all glass above this, then I intended to set the hives on stands at some distance from the window, leave entrance open so that they could come out of hive and take their flight and return. I also thought of leaving them there for the summer season next year, but as I read over wintering bees in cellars and how restless they get and leave the hive, to get lost from the swarm, etc., I am prompted to write and ask what is the experience of those who have previously tried this stunt. I might add that the attic will not get excessively cold or hot, and if the bees would behave as if they were out of doors and only come to opening on warm days, I do not see why they should not do well.

2. Another question is about how much opening is required for winter if the narrow side of the bottom board is used.

10WA.

Answer .- 1. I have never tried wintering bees in an attic, either closed up or free. But I have heard of several such attempts and never heard of any success. There are several difficulties about it. The first is that, even in an attic, there is more or less noise from the people living in the house, and that is bound to disturb the bees and make them come out in weather that is unsuitable. Then, if they are in perfect quiet, they are likely not to learn when there is a day sufficiently warm for them to fly. On the other hand, if they were to be confined to the hive, they would fret and worry. Better have them in the cellar, if they are to be shut in.

2. Strong colonies may be left entirely open, but if they are weak it is well to leave them just enough opening to allow ventila-Sometimes they are too much shut tion. in and the dead bees clog the entrance. Better have a little too much entrance than have too little.

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If you use ten-frame Jumbo hive, with the regulation spacing, you will find it advisable to give them only nine frames, which will make a bee space of about 11/3 inches. They do better. That is the space we use in our Dadant hives.

WINTERING OUTSIDE WITH FLAX STRAW PACKING

The weather here gets down as low as 20-25 below zero through December and January, but stays that cold only a few days at a time.

I am going to put the hives (eight of

January, but stays that cold only a few days at a time.

I am going to put the hives (eight of them) on a platform, about a foot apart and about one and a half feet above the ground, and then build a frame around the hives, leaving about a foot of space between the walls and hives, also on top. I then wish

to pack about six or eight inches of flax traw under the floor and bottom boards of the hives, and also all around the hives and

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on top.

1. Do you think this would be plenty warm for them?

2. Or would it be better to set the hives tight together and not pack any straw in between them?

between them? between them?

3. What would be the best way to fix it so that the bees may come out when it is warm enough and also have plenty of ventilation inside?

Answer.—The method you propose to follow is good. But you must beware of getting your bees bewildered by the change of location from their summer position. For this purpose you must be very careful in moving them, to move them gradually, so that, during the remaining warm days, they will slowly get accustomed to the new positions. It is for that reason that we believe it to be a good plan to have some space between the hives. Otherwise it would probably be better to have them close together, so that they would help keep each other warm. That is why some people arrange their hives in clusters of four, facing different ways, and keep them thus during the summer.

If the facing to the north was not so objectionable in a cold climate, we would advise you to face them different ways so that they would be less apt to mix from different hives. When bees drift from one colony to another, it is always the weak colonies that lose bees, to the benefit of the powerful ones.

If you had a good cellar, at your latitude it would be best to winter them in the cellar, putting them in early in November and taking them out late in March.

FEEDING HONEY AND SYRUP FOR STORES

I have 200 pounds of last year's honey that I want to feed to my bees this fall. It is candied, or granulated. After melting it out, should I thin it with water or feed it

out, should I thin it with water was activitied?

2. Could I make a sugar syrup and put one of honey and one of syrup? Will honey and sugar go together for bee feed?

I got a good crop this year, but there has been no honey coming in for the last six weeks, so they have eaten a lot of it and I have a number of late swarms that are very numerous in bees, but no honey for winter. I want to give them some seeled honey and some syrup. I do not look for them to get anything more this fall, as the honeyflow seems to be gone for this year. My honey granulated in the combs in the hives last winter and they threw it out this spring, something I never saw before.

KANSAS.

Answer .- 1. I would not thin that honey with water after melting it if it can be fed to the bees. If you feed it slightly warm, they will take it easily.

2. You can make sugar syrup and mix with honey. It will be good, as it will keep the sugar from crystallizing. They usually put in tartaric acid to keep it from crystallizing, but using honey with it is better.

We have never seen bees throw away granulated honey. But your bees were probably short of water at the time. If you had wetted the combs of granulated honey with a little water, the bees would have used that water to melt it. I cannot imagine that they threw much of it away. I am wondering what kind of honey it wasperhaps alfalfa, for alfalfa granulates very readily.

VENTILATION IN BEE CELLAR

I am planning a bee cellar, and the venti-lation question has me stumped. The size is 12x18 and 8 feet high. The walls are of tile, with a concrete roof which is flat. It is to be built on a hillside. What is the

best way to ventilate this room? I saw a plan, in your Journal a number of years ago, of a cellar with two flues in the ceiling. I hunted for that copy of the Journal, but cannot find it.

cannot find it.

Another idea is to have the intake laid underground. If I wanted to do this, I would have to dig down almost eleven feet to get below frost, because of the steep hillside. How long should the flue be? In my case it would only be about forty feet that would come below frost.

If you know of another system that is all right, please send me the details. Thanking you in advance, I await your reply.

WISCONSIN.

Answer.-You do not say how much of your cellar is out of the ground, so I cannot advise you very much.

Since your cellar is in the sidehill, the ntrance must be on the level. I would make a double entrance and place the intake of air in the anteroom, say a 2-inch pipe, with one end exposed outside and the other end just within the cellar entrance. As for the flues for air escape, I would put them either in the roof or on the sides just below the roof. Make two of them of about 11/3inch pipe. This will give a trifle more exit than intake, but will be sufficient.

Some people do not make any air conduits at all. But we consider them essential, although in some cases there may be enough air coming in through the joints of the

The reason why we want an anteroom is to prevent the cold air from invading the cellar. If the cellar gets too warm, it is easy to cool it by opening those doors at night for a little while. I doubt that there is much need of that in Wisconsin. Keep a thermometer in the cellar and keep the temperature at the point where the bees are quietest. It will be between 42 and 48 degrees.

BEES DIE IN HIVE

I have one swarm, and they only make enough honey for themselves. I have them on eight-frame hive. I have had them six years. They have only swarmed once. Last year I got a new queen and requeened them. She laid eggs in only five frames. This spring I had two swarms. One swarm died as fast as they came out of the hive until they were all dead. Then I bought another swarm and put in that hive and they all died.

Answer .- Your question is a puzzle, for I do not know whether there is a good chance for honey in your vicinity, whether the bees had enough to keep them breeding, and in what shape they went through the winters.

Guessing at a reply, all I can say is that they probably have a queen who is not prolific. Evidently the queen you bought and gave them was not very prolific. The fact that they swarm at all would be evidence that their location is unfavorable, perhaps too hot in summer, so that they swarm before they have an opportunity of making much honey.

There may be other causes for your trouble, but I cannot guess them.

WINTERING IN A CHICKEN HOUSE

WINTERING IN A CHICKEN HOUSE

I have a chicken house 14x20, built of lumber and covered with roofing paper all over, except in south side 18x3 feet for windows. Hardly ever had a frozen comb on chickens. Have sold my chickens and have no use for this house this winter. Now for my question. I have twenty-five colonies of bees. I have been thinking of putting them in this chicken house for winter. Would you take out all windows and leave them open? Or I can get a roll of roofing and make the house absolutely dark. I have no cellar, and thought this house would be better than packing outside.

IOWA. IOWA.

Answer.-You could not safely keep the

bees confined in that house all winter, because it would not be warm enough. The thermometer, even with the twenty-five colonies in the chicken house, would go down below the freezing point, and 42 degrees is about the lowest that bees can stand for a length of time without having to take a flight.

The only thing that you could do to use that house for your bees would be to place the colonies in it, with a chance for a flight on warm days. But you could probably not put in the twenty-five colonies so that each of them would have a chance to fly. Perhaps you could do so by putting them in three stories. I doubt that this would be very satisfactory.

If I wanted to use that chicken house for bees, I would place in it as many colonies as it would hold, side by side, facing south. There is, however, another question, and that is to have them learn the new situation so that none of the old bees would get lost. This might be done by placing a slanting board in front of the entrances when they would be about to take a flight, so that they would notice that their location was changed. You might try this on a few. Such a building is very good to protect the colonies.

IS UNSEALED HONEY RIPENED BY BEES?

1. You stated in July Journal editorial that in wet seasons the bees sometimes seal honey before it is fully ripened. If such honey is left on the hive, what will happen to it? Will the bees unseal it and ripen it, or will it ripen without being unsealed? Or will the bees leave it sealed and let it fearment? ferment?

ferment?

2. Suppose, in a wet season like the one just closed, the bees were given too many supers and are caught at the end of the honeyflow with a lot of unfinished honey (many of the frames either having none or very little of it sealed). If such honey is allowed to remain on the hive for a month or a month and a half after the close of the honeyflow, will it be safe to assume that it will all be ripened by that time, even the frames that are not anyways near full and have none of it sealed?

INDIANA. INDIANA.

Answer .-- 1. Honey will sometimes ripen in the sealed cells. Then its appearance is even whiter than usual, because a space is left behind the cappings. Sometimes also it will ferment in the cells, and we have sometimes seen sealed honey that burst its cappings on account of fermentation. Then the bees work it over and improve it.

2. When the season ends, the honey in the unsealed cells is ripened by the bees and becomes as thick as the sealed honey. Usually the bees store it in a more compact form, so that some combs that were partly full are emptied by the bees and this honey is stored nearer the brood.

PREPARING COLONIES FOR WINTER

PREPARING COLONIES FOR WINIER

1. I should like to have your advice on closing the entrance on my hives for winter. I winter my bees out on the summer stands, by packing with flax straw.

2. Would you advise placing a comb honey super over each colony with leaves to absorb the moisture?

MINNESOTA.

MINNESOTA

Answer .-- 1. The entrance to the hive should never be entirely closed, as they need some air to breathe. Besides, they must be able to fly out on warm days, or they would worry. We usually reduce the entrance according to the strength of the colony.

2. It is well to have moisture absorbents in an upper story, whether it is leaves or wool waste, or cork, or oat chaff, in sacks.

This Bee Man Tells 'Em and Sells 'Em

By Jane Rider

Is there a lobby in the theatre in your town, Mr. Bee Man? If so, there is a chance for selling your wares. A Peoria county bee man recently staged a sale in the lobby of a Peoria theatre which introduced his honey products to more people and disposed of all the products from his season's crop of honey.

The bee man's daughters belonged to a class of girls of the flapper age. Their attractive looks helped the sales, and they used crepe paper aprons gaily decorated with cut-out bees and cut-out clover blossoms which were pasted about both aprons and the bands about their heads. The girls decorated their booth accordingly.

He made the girls an offer—he wanted a certain sum for his products and they were given a free hand to charge what they pleased, keeping the profit for their treasury. The girls had had to do some tall figuring to make as large a profit as possible without overcharging the people.

They made cakes containing honey both inside the cake and in the icings, cookies, candies, biscuits and honey, by the aid of a small electric oven, and a new honey drink which they had experimented with and found very refreshing. Of course they had both the extracted and comb honey on sale, too, and it was surprising what a great amount of sales was made from this class.

The theatre owner donated the use of the lobby to the girls, furnishing reclining chairs for those who cared to eat or drink in the lobby. He also ran a slide, preceding the show, calling attention to the girls' booth of honey products for their charity and ice fund.

This same bee man has taken over the output of many other bee men in his community, since he has found more ways of selling than his fellow workers. He is now arranging several prizes to be given the school children as soon as school convenes, for their best essays on honey or bees. He is also planning to arrange a trip of the school kiddies to the apiaries of the community before they attempt to write their essays.

Last year this same bee man furnished the blotters for the school children. They bore the constant reminder as to how good honey was for growing children, and each blotter bore a recipe for a delicious candy which required honey in the making. With children's ever present sweet tooth, it is needless to say this was a sure-fire merchandising plan.

As for his roadside marketing: His small son and four other lads run a cold milk stand on Sundays and during vacation during the warmer months. He, too, sells honey products both day and evenings. have a fairly good radio set at the little canvas shop along the road, and the boys always get all the ball scores and post them on a huge signboard they have erected just beside their little tent shop. They have made hundreds of regular customers and friends, who stop to learn the scores and get a refreshing drink, a honey and bread sandwich or a sack of honey candy. Last year the lad's father put down a well for water, and they now have water free for motorists to drink and for their thirsty radiators. I once heard little Edward remark: "Just so we get them to stop-that's all that's necessary; we can sell 'em if they stop!"

Just recently the boys completed a huge sign, "Eat Here — Water," which they painted with phosphorus so it could be seen more readily at night.

As newspapers are always glad to get tips on news feature stories, he kindly tipped off the two city newspapers and offered to have the kiddies, in their snowy white uniforms, pose for the newspaper photographers, which offer was willingly accepted. Soon there came out in print some splendid photos of the lads and their ever-growing business venture; a story on their father's apiaries, some close-ups of the bees at work, and a picture of the bee man himself. The Sunday that feature appeared hundreds of motorists visited the place, glad of something new they hadn't seen or heard of before, and of course stopped to spend a bit of money. That was a paying proposition indeed, with a mutual benefit for both bee man and newspaper.

Why not lift one or more of these ideas into your own honey selling business? If someone else made a success of these methods, you can, too.

No Harm Can Come From Eating Honey

Recently the discovery was made that honey disinfects any foreign matter which may fall into it, says E. F. Phillips, of the Cornell University Exposition Station. Beekeepers have long known that honey has the faculty of absorbing moisture, and recently it was learned that this prevents its ever becoming contaminated, because any foreign matter which falls into it is immediately dried out and purified.

If honey is placed in a barrel that is not thoroughly dry, it will so thoroughly absorb the moisture from the barrel that the seams may open and the honey run out. In the same way if any bacteria or other minute organisms fall into the honey they are

dried out and cannot continue to live without moisture. This characteristic of honey which causes it to be a mild but highly effective disinfectant has greatly increased its desirability as a food. Even with utmost care a consumer seldom feels sure that some injurious organism may not have come in contact with it, but with honey he may be assured that the honey will take care of the matter itself.

Not only does honey itself furnish protection to the consumer, but the methods by which it is produced make it an unusually safe food. In the case of comb honey the cells of the comb are sealed by the bees themselves, who are known to be clean. With respect to extracted or liquid honey the cappings of the comb are removed with a heated knife and the comb is then placed in a covered centrifugal machine and the honey is thrown out. The honey flows from this machine into covered settling tanks and then into the containers in which the consumer gets it. Thus it is untouched by human hands throughout the process and may be regarded as one of the safest and cleanest of foods, says Mr. Phillips .- From the New York State College of Agriculture.

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"Hygienic Honey"

Another interesting honey leaflet was received from Herbert M. Bachman, of Hillman, Michigan, who calls his apiaries the Hygienic Honey Apiaries, and his honey Hygienic honey. It is an intriguing name, suggesting, of course, sanitary conditions, purity of product, and so on, a psychologic choice of words.

The leaflet lists various recipes for honey, and gives facts concerning the product, including the advice of physicians on the health value of honey. Mr. Bachman reports that 80 per cent of his honey is delivered bi-monthly directly to the housewife. The leaflets are reserved for purchasers of Hygienic honey. The material in the leaflet is gathered from the users and the copy changed each year.

Beaver County and Parowan Valley

While some sections of the state are suffering from drought, Utah beekeepers anticipate nearly a normal crop of honey, according to D. H. Hillman, State apiarist.

In Beaver county the honey crop is regarded almost as a complete failure, it is reported, and the flow of honey in the Parowan Valley is slowing down because of dry weather and the resultant damage to vegetation, but heavy production is being reported from other sections.

G. P.

MEETINGS AND EVENTS

Current association meetings and organization notices are published in this department each month. Secretaries and other officers of organizations who wish publicity here should make sure that notices are sent in before the fifteenth of the month preceding publication. Frequently notices are received too late for use and consequently do not appear at all.

International Conference of the Apis Club

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The International Conference of the Apis Club was held this year in Switzerland, the President of the club for 1928 being Dr. O. Morgenthaler, the well-known authority on diseases of bees. The conference opened on Sunday, August 12, when the club was the guest of La Societe Romande, the French-Swiss beekeepers' association, at Geneva. The President and M. Mayor, the President of La Societe Romande, welcomed their visitors; and the latter, in his address, gave an account of the life of Edouard Bertrand, formerly editor of the Revue Internationale d'Apiculture (now Bulletin de la Societe Romande). The first official act of the club on the following day (August 13) was to place a wreath on the tomb of this eminent beekeeper.

On August 13, Dr. Armbruster (Berlin) took the chair at the first session, papers being read by various experts in bee science and practice. We may note those of Baldensperger on bees in the natural state and of Millen on the measures taken to combat diseases of bees in Canada. Artificial - base foundation, laying workers, and the views of Perret-Maisonneuve on the utilization of wax-like substances by bees also came up for discussion. In the afternoon the party visited Huber's house at Pregny and an experimental apiary where work on acarine disease is in progress. Papers on this disease were read by Morgenthaler, Angelloz-Nicoud (Lyon, France), and Illingworth (England).

Tuesday, August 14, was spent traveling by steamboat and rail to Berne, the visitors being thus enabled to see something of the lakes of Geneva and Thun and of the beautiful scenery of the Bernese Oberland. In the evening the club was the guest of the Verein Deutsch-Schweizerischer Bienenfreunde (V. D. S. B.), the German-Swiss association, at a reception.

Wednesday, the fifteenth, was devoted to the work of the conference, the chairmen at the morning and afternoon meetings respectively being M. Baldensperger (France) and Captain Morgan (England, Secretary of the club). Papers were read by

Armbruster (Germany) on old beekeeping methods, especially in the Alps; Rosch (Germany), division of labor in the hive; Zaiss (Germany), on the "psychology" of hive life; Jaubert (France), coloring matter of wax; Soudek (Czecho-Slovakia), nectar and pollen substitutes and their effects; in the afternoon by Brunnich (Switzerland) and by Giraud (France), on queen-rearing, and by Elser (Switzerland), on chemical analysis of nectar. The later afternoon was spent in inspecting the laboratories at Liebefeld, where Dr. Morgenthaler is in charge of the researches on bees. Another reception, held by the V. D. S. B., provided a very pleasant evening.

At the afternoon session the following honors were announced: The President for 1929 is Prof. Dr. Ludwig Armbruster, of Dahlem, Berlin. Dr. Armbruster, who is in charge of the Institut fur Bienenkunde at the Prussian Landwirtschaftliche Hochschule at Dahlem, is well known from his many publications on bees, also as the editor of the Archiv fur Bienenkunde. In accordance with the custom of the club, the 1929 conference will therefore be held at Berlin.

Vice-Presidents: Mlle. Baldensperger (France), Dr. Freudenstein (Germany).

Fellows: Prof. Dr. Burri (now director of the Liebefeld Anstalt; he contributed greatly in the early years of the century to our then scanty knowledge of the foulbroods); Dr. Jaubert (France), Dr. Rosch (Germany), and Dr. Soudek (Czecho-Slovakia).

On Thursday, the sixteenth, the club visited the Emmental and inspected the beautifully appointed bee house of Herren Lehmann and Zurcher, listening to a description of the methods of manipulation employed with the Swiss type of hive. A mating station was also visited, and papers on queen-rearing (Justrich), the insurance system of the V. D. S. B. (Frei), and the combating of disease in German Switzerland (Leuenberger) were read. The conference closed with a farewell meal at Moosegg.

All the papers read at the conference will appear in the November and subsequent numbers of The Bee World and will thus be available to all English-reading beekeepers.

Annie D. Betts.

Official Lineup of West Virginia Association

The regular annual meeting of the West Virginia State Beekeepers' Association was held at Ronceverte, W. Va., August 22 and 23.

The officers for the new year are as follows:

Roy E. Wiseman, President; T. K. Massie, Vice-President; C. B. Hiett, Secretary-Treasurer.

Board of Directors: First congressional district, Will C. Griffith, Ohio county; second congressional district, F. J. Booth, Barbour county; third congressional district, A. B. Hicks, Webster county; fourth congressional district, Grant Luzader, Ritchie county; fifth congressional district, M. L. Gwinn, Lowell, W. Va.; sixth congressional district, A. J. Reaser, Greenbrier county.

Interesting talks were given by Mr. A. D. Hiett, of the G. B. Lewis Company, on "Packing and Marketing Honey," and by T. K. Massie on "The Best Hive in the World." The subject of diseases came in for its share of discussion and most of the twenty-third was spent in diagnosing cases of disease and visiting apiaries near Ronceverte.

Very definite plans were made for increasing the membership for next year.

Iowa Meeting at Cedar Rapids

The annual convention of the Iowa Beekeepers' Association will be held at Cedar Rapids on November 15 and 16. The convention is held at the same time and place as the Mid-West Horticultural Exposition to enable the members to see the show without extra travel. Since the honey display is an important feature of the Mid-West, it is expected that many visiting bee men will enter their product in the competition.

Among the features of this year's meeting is a memorial session, held jointly by the beekeepers and the horticulturists, in memory of the late Eugene Secor, who was long prominent in the beekeeping field.

Demonstrations of the use of honey in the home, by a member of the staff of the Kellogg Company of Battle Creek, Michigan, will be a daily feature of the show.

Tanquary to Minnesota

Dr. M. C. Tanquary is the new chief of the Division of Bee Culture at the University of Minnesota. Some months ago the resignation of Prof. Francis Jager, who has held that position for fifteen years, was announced. Not until within a few days

of the time he took up his duties was the name of his successor made public.

Dr. Tanquary is a man of wide and interesting experience. He was a member of the Macmillan Arctic expedition and met some real adventure in the far North. Returning to the States, he became a member of the faculty of the Kansas College of Agriculture. Later he became State Entomologist of Texas, and for several years past he has operated extensive commercial apiaries in North Dakota. Professor Tanquary retains his bees and will continue to produce honey on a large scale under the care of a resident manager. His wide experience in all phases of bee culture fit him admirably for his new position, and the success of his new work is assured.

At the Turin International Congress

The first echo to reach us from the International Congress of Turin is an address by Mr. M. Barthelemy, of Marseille, one of the leading members of the local association, on the question of the rearing of queens. Mr. Barthelemy recommends the Pratt and Doolittle methods of queen-rearing. He wrote at length, giving the management in its entirety. It is almost like a short treatise.

We are very sorry that we were unable to attend this Congress, but traveling is getting to be quite a task for the senior editor, and he is the only one of the family who could enjoy a meeting where French and Italian were the principal languages used. An account of this meeting is given in this issue.

Beatty to Grade North Dakota Honey

Mr. J. Wayne Beatty, of Fargo, has recently been granted a honey inspector's license by the U. S. Department of Agriculture. The appointment authorizes Mr. Beatty to inspect, sample, grade and to certify to the condition and grade of extracted honey for warehouse storage in Fargo. The certificate is in compliance with the U. S. Warehouse Act.

Mr. J. Wayne Beatty is the son of J. A. Beatty of Fargo, well known among North Dakota beekeepers, and one of the leaders of the industry in the state.

Southern States Conference, Mardi Gras

Notice comes from W. E. Anderson, Louisiana State Entomologist and Secretary of the Southern States Beekeepers' Conference, that the next meeting of this organization

will be held in Baton Rouge, Louisiana, on February 8 and 9. This is immediately preceding the nationally famed Mardi Gras at New Orleans on February 12.

This is a rare opportunity for northern beekeepers to enjoy a few days in a sunny winter clime, see New Orleans at her gayest, and at the same time attend a good meeting.

The last meeting of the Southern States organization was held at Texarkana on August 6 and 7. Resolutions were passed commending the Kellogg Company for their cooperative advertising; pledging support to H. E. Barnard and the American Honey Institute; assuring cooperation with the southern field station, and condemning any change in the national grading rules.

Mid-West Exposition at Cedar Rapids November 14-17

The Mid-West Horticultural Exposition will be held in Cedar Rapids November 14-17, inclusive. This is an exposition of all horticultural products, and entries are made in general from Pittsburgh to Denver. In the honey department, any state or province of Canada may enter. There are approximately six hundred dollars offered in cash premiums in the honey products department. The premium list in this department has been entirely revised so as to allow competition of the darker grades of honey. The premium lists are available from R. S. Herrick, State House, Des Moines. It is hoped that many states will be represented by entries in this show. Professor Jager will serve as judge.

J. B. Munro Edits "Farm and Home"

J. B. Munro, B. Sc. A., has been appointed editor of Farm and Home, the only farm weekly published in British Columbia. He resigned the position of assistant agronomist for British Columbia to take over the newspaper duties referred to.

An authority on bees and enthusiastic about possibilities for the extension of the honey industry, Munro is the son of a famed apiarist in Ontario.

Ball to Arizona

Dr. E. D. Ball, formerly head of the Department of Zoology of Iowa State College of Agriculture and State Entomologist of Iowa, and later director of scientific work in the U. S. Department of Agriculture, has lately accepted a position as dean of agriculture and director of the experiment station of the University of Arizona.

The Cause of Foulbrood

By C. V. Woolsey

A few years ago, at our Tri-County beekeepers' meeting in Wheatland, I asked our State Entomologist what was the cause of American four-brood. His reply was: "I am going to speak on that subject this afternoon."

When his turn came to speak I was all attention, for this is a subject in which I am deeply interested. He began by telling how this dreaded disease works on the larvæ of the bees and how the old bees keep dying off till the colony becomes so weak that the robbers enter it and spread it from colony to colony. We already knew that, and experienced it long before the state thought of spending a lot of money to find it out.

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But now he goes on and I begin to believe that the state has not made such a bad investment after all, as he tells us about strong magnifying glasses, smears, and at the end of all this, how they found a germ. But I have heard of all this before and I am hoping to find out what the original cause is. It appears that this particular germ is only a foulbrood germ and would not give the measles to a child or the scarlet fever to anyone, but only the foulbrood disease to the young larvæ. We knew that the human family suffered from germs and now we find the bees do also.

But this is as far as we got. I wanted to know where this germ comes from. His reply was: "I do not know." I have asked the same question of people who are devoting their entire time to the study of this question and their reply is the same.

Mr. Frank Sazama, our local bee inspector, must be given credit for answering that question in the best manner. He answered by asking another question: "Can you tell what causes life? As long as the human race has existed we have had diseases from germs. These germs are spread in the same manner. To be sure, we have made progress, so that many of these germs are no longer harmful to people, but they are still with us and are likely to be with us until the end of time."

Now that we have discovered that the bee family has germs, we are going after them rough shod; just as soon as all the bees in the state are killed we will be rid of their germ, but when we have bees we must expect to have germs, and they must be combated the same as the germs in the human family. It is good to have a law concerning the diseases of bees, but I do not believe in killing the cow because the calf is sick. We

should save the cow and do what we can for the calf.

We are not progressing; when our bee inspectors are met with shotguns and threats of dynamite there is something wrong. The American people as a rule are for progress and are willing to do almost anything to help it along, even to the giving of their lives. Witness the fight against yellow fever in Cuba and the Panama strip. But we must remember that as long as there are bees there will be chances of foulbrood, and we should learn how to treat it without doing away with the bees and yet keep it down wherever it is found. Wyoming.

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Honey in the Limelight

Honey may be the next food to benefit from scientific research. The claim of purity for honey is not new, but now it is discovered why it is free from germ life of any kind. Honey is its own disinfectant. It draws moisture from anything with which it comes in contact. It kills all organisms by absorbing their liquid content. Thus no matter how exposed it constantly purifies itself.

There ought to be some way for the beekeepers to cash in on that knowledge. The public loves to make a fad of foods. It has done so in the case of liver, to the great profit of those who have it for sale. Given only a moderate excuse, consumers will seize upon it, magnify it, recast it to suit their whims or their needs, and there you have the makings of widespread popularity for some food. The liver business is wearing out. The public is about ready for a new food fad. Honey is in line. It is pure. It has to be .- Editorial in Chicago Drovers Journal.

Reduced Railroad Rate on North Dakota Honey

The Traffic Rate Committee of the North Dakota Beekeepers' Association (consisting of W. H. Magill, chairman, Ralph G. Smith and M. W. Cousineau), in cooperation with N. E. Williams, Traffic Commissioner of the Fargo Commercial Club, has been successful in securing a reduced railroad rate on honey. The following note was received from Mr. Williams' office recently:

"The honey rate from Fargo to Duluth and the Twin Cities, in connection with local traffic and traffic destined beyond, on account of independent action taken by the Northern Pacific Railway Company, August 20, 1928, will be reduced 11 cents per hundred pounds. This reduction is equivalent to \$33.00 per carload of honey."

Report of the Swiss Commission on Nosema Disease

This commission, which sat at Berne in December, 1927, under the presidency of Prof. Dr. Burri, Director of the Federal Veterinary Service, has issued an interesting report. Several drug treatments have been found to be effective in dealing with the disease. These are:

Gentian tea. Put 15 to 20 grammes of gentian roots (the species of gentian is not stated) into 10 litres of water, boil for at least an hour; then add as much water again, after having first strained the tea. Use the fluid instead of water to make up syrup for feeding.

Syrgotral (called "Nosemacid" in beekeeping circles), a colloidal silver oxide used in veterinary medicine. Five or six per cent of this fluid is to be added to the syrup.

Chinosol and Calcium Phosphate. Chinosol is a disinfectant harmless to man and higher animals when taken internally, A 1/10,000 solution (1 gramme in 10 litres) was found effective in dealing with Nosema. It has a pronounced flavor and cannot be used while the supers are on.

Calcium phosphate (1 gramme per litre) was also tried in the winter feed with good results,

In Switzerland, alternate years appear to be Nosema years, the odd number years being the unlucky ones, in most locations. The disease is most prevalent in spring. Its effects appear to be variable; thus there is no correlation between the amount of infection of the individual colony in an affected apiary and the honey yield of that colony. If Amoeba disease (Malpighamoeba mellificae, Prell) be also present, the chances of any honey crop are, however, practically nil, to judge by the figures given.

It may be added that it is necessary to examine the colonies in April (at latest) for Amoeba, as it is scarcely to be found after this date.

Annie D. Betts.

Moving Bees with "Very Little Disease"

Some 10,200 colonies of bees moved into Utah from California! And it is reported that there was very little foulbrood among them. Speaks well for inspection service—but, "they" do say that some of the territory was a "wee" bit overcrowded, and some ranchers are "sore" because some of these men used no care to give their bees water, permitting them to pester watering places of neighboring ranchers. If California bee men want to continue to move into alfalfa seed

districts, they need to exercise care. Complaints by a few big ranchers would quickly quarantine the state. An ounce of prevention.

And as the country settles up, ranchers complain that extracted honey men make their bees so cross by brushing extracting combs and rough treatment. Soon bee men will have to buy locations—and they may have to buy a hundred acres to get a location. Meanwhile, beekeepers who have gentle bees help foot the bills. Remember, you may get by with a thing this year; but there are other years coming.—Reporter.

Bartz Runs \$10 Short in October Issue

In the October number, on page 516, we credit Hugo E. Bartz, of Keytesville, Missouri, with \$16.00 prize money at the State Fair. The amount should have been \$26.00—\$10.00 for first prize on white clover honey, twenty-four section case; \$10.00 first prize on light amber honey, twenty-four section case; and \$6.00 first prize on six pounds white candied honey. A pretty good record, three entries and three blue ribbons. This is the second year Bartz has done the same thing. Missouri beekeepers better watch their step.

The Father of Movable Frames

(Continued from page 557)

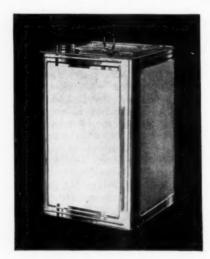
pulpit was put aside on the rostrum, and after explaining to his audience that he did not feel so well as usual, he seated himself and began to deliver his sermon.

"I want to talk to you of the love of God, and how we ought—" He wavered, a tremor passed through his frame, and he sank softly back in his chair. His pastor went to his side and his grandson was soon with him. There was a deep hush in the congregation. Nobody stirred from the pews. God seemed close. Father Langstroth had died with loving praise of his Maker on his lips.

Here a few words might be added. words the father of movable frames had inspired S. L. Boylston to write: "My friends, the Reverend L. L. Langstroth needs no more eloquent epitaph than his own, 'The Hive and the Honeybee.' It will live longer and be read more broadcast than all your fervid eloquence, your studied rhetoric, or your heartfelt grief. He needs no monument to be seen, perhaps, a few hundred yards off; his modest monuments already adorn the premises of the thousands who today earn their livelihood, in whole or in part, or derive pleasure and profit from the work of his brain . . .

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Building Trade with Better Containers



WHEELING Honey and Syrup Containers with their bright, well-coated surfaces create the right impression for your products. This five-gallon or 60 lb. Square Can is a splendid example. Top and bottom are double seamed and soldered, making a leak-proof container of exceptional strength. Furnished with 1 3-4", 2" and 2 3-4" screw cap with cork or paraffined pulp-board liners in either 107 lb. or 135 lb. tin-plate.

We are also in position to furnish all sizes of friction top honey and syrup cans. Let us quote prices on your requirements.

Wheeling Can Company

Wheeling, West Virginia

Crop and Market Report

Compiled by M. G. Dadant

For our November crop and market page we asked reporters to answer the following questions:

- 1. How is honey selling compared to last year?
- 2. Are prices holding up to last year?
- 3. Any offers on your honey? If so, what?
- 4. Doesn't it look like advance prospects are for an early cleanup of the 1928 crop?

HOW HONEY IS SELLING

Only a few sections reported short sales of honey and complained that there would be difficulty moving the crop. One of these was southern Georgia and Florida, where the crop has been exceptionally large, Louisiana and Texas.

In practically all other sections of the country honey was selling at least equal to last year, and in many instances better. This was true especially of the New England States, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa and Missouri.

In the intermountain territory, although local sales were perhaps no better than last year, there seemed to be a much stronger current in the sales of carlots of honey and the usual distressed ca. seem to have rapidly disappeared already.

All in all, undoubtedly honey is selling at least equal to last year and we would judge that there is 15 to 20 per cent more moving into the hands of consumers than there was at the same time in 1927.

HONEY PRICES

Similar to honey sales, prices have not shown any indication to drop except in some instances. Florida and southern Georgia report honey prices weakening over last year. The same is true in Louisiana, where the crop was large, and in Texas the prices have slumped from one to two cents per pound over the 1927 average.

In practically all other instances the prices are at least the equal of last year and there has been in many places a stiffening over last year's prices. This is true in the Central West, where the crop this year was light, and a cleanup is anticipated without any difficulty.

We believe before the year is over many of the uninformed buyers who sold good white honey at 6½ to 7 cents per pound will wonder why they did not obtain a price of at least 7¼ to 8 cents per pound for their crop.

HONEY OFFERS

We find very few offers on honey in the eastern states. In fact the volume is not sufficient to warrant it. In New York offers have been made on clover extracted honey in ton lots as low as 8 cents per pound and as high as 10 cents per pound. Alabama is reporting a price of 7 cents on light amber honey offered in ton lots or better.

In Texas the price is ranging from 7 to 9 cents, depending on the quality.

Michigan reports some offers of 8½ cents f. o. b., as does Wisconsin; and Minnesota reports offers of 7½ to 8 cents in carload lots.

The ton lot prices range around 9 cents.

In Illinois offers have been made of 8% to 9 cents for good white honey and there is an inclination not to sell quite so cheaply. In a majority of instances in the

Dakotas, the plains area and the intermountain territory, we believe that offers have ranged around 7 cents to 7¼ cents per pound, with a number of sales being made of carload lots as high as 7¾ cents per pound, and one or two at 8 cents per pound. This is for good, white honey. We believe the bulk that has been sold has ranged around 7¼, 7½ and a number of cars at 7¾ cents per pound.

In California orange honey is bringing 9 cents, $9\frac{1}{2}$ cents and even 10 cents per pound.

In the Canadian provinces the honey price has been somewhat the reverse of the States. The tendency has been for reduction in price over last year. The Manitoba price is about 1 cent per pound lower than 1927 and Ontario prices are somewhat weakened over a year ago. The extreme western provinces, of course, and Quebec are still using practically all of their honey themselves and are not readily affected by the other provinces.

HOW IS THE CROP?

We find some discrepancies in our last month's report on crop conditions on the crop harvested in different sections of the country. For instance, North Dakota has a very much smaller crop than has been previously reported, and we believe practically all the North Dakota honey is already out of the hands of the producers and being distributed.

There are scarcely any sections, except perhaps Louisiana, that report a larger crop than has been mentioned in the previous issue of this magazine. All in all, the crop undoubtedly has been far under that of 1927, and even with the considerable carryover should move rapidly out of the hands of the producers and be nicely cleaned up before the new crop comes, unless there should be such a stiffening in price as to make a deterrence on the consuming market.

It would be our idea that parties wanting honey to supply their trade be forearmed by getting such honey on hands before another month elapses.

All in all, we are very optimistic on the honey situation. The fruit crop in the central areas has been moderately small, and even though there is a heavy crop in the Northwest the demand for honey with the cold weather is going to be very considerable throughout the central sections.

The big feature is that there are no great numbers of distressed quantities of honey in the West looking for buyers at almost every figure. The producers seem to be in a very favorable position and inclined to want to stiffen prices.

Just what effect on the market the consolidation of honey packing interests has had and the activity of the newly formed American Honey Institute is very hard to determine. Both of these organizations have been operating so short a time as to give no idea as to the importance of the scope of their present operations, but undoubtedly both of them have had some effect, especially that of the consolidated honey packing interests, which, on account of their favorable connection with other distributing interests around, are in a highly desirable position to distribute honey to the very best advantage.

CLASSIFIED DEPARTMENT

Advertisements in this department will be inserted for 7c per word, with no discounts. No classified advertisements accepted for less than 49c. Count each initial or number

less than 49c. Count each initial or number as one word.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

As a measure of protection to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisements of used beekeeping equipment or of bees on combs must be accompanied by a guarantee that the material is free from disease or be accompanied either by a certificate of inspection from an authorized inspector or agreement made to furnish such certificate at the time of sale.

BEES AND OUEENS

NOW booking orders for package bees for spring shipment. Special prices on quan-tity orders. Write for circular and price list. J. M. Cutts & Sons, R. 1, Montgomery, Ala.

WE have special low prices on orders booked during November for package and nuclei bees, also on queens. Thousands of packages for sale. We have a good offer for several large buyers. Safe delivery, satisfaction and no diseases guaranteed. Please write or wire us for our low prices, also references from customers all over the United States, parts of Canada and even Cuba. M. Voinche, Bunkie, Louisiana.

BOOKING orders for my thrifty Caucasian three-frame nuclei for May delivery, also queens. Yards inspected; no disease. Peter Schauffhauser, Havelock, N. C.

BRIGHT three-banded Italian queens, package bees, finest quality. Write for 1929 prices. Taylor Apiaries, Luverne, Ala.

WINTER QUEENS-Good tested three-band \$1.00 each. I send queens anywhere any month of the year.

D. W. Howell Shellman, Ga.

PACKAGE BEES—Special offer for 1929. Price list free. Hurry. The Crowville Apiaries, J. J. Scott, Prop., Crowville, La.

I.EATHER COLORED ITALIAN QUEENS— \$2.00; after June 1, \$1.00. Tested, \$2.00. A. W. Yates, 15 Chapman St. Hartford, Conn.

HIGHEST grade Italian queens Tested, \$1.50; untested, 75 cents. Package bees, one pound, \$1.50; two pounds, \$2.50; three pounds. \$3.25. Have had no disease. State inspection certificate with each shipment. Safe delivery guaranteed.

T. L. Davis, Buffalo, Leon Co., Texas.

QUEENS for the balance of the season quality equal to the best. Write and geprices. O. P. Hendrix, West Point, Miss.

PACKAGE BEES AND QUEENS— Jasper Knight, Hayneville, Ala

THRIFTY Caucasian queens from daughters of imported mothers. After April 15: One, \$1.50; twelve, \$14.00. Safe arrival. Tillery Bros., Greenville, Ala., R. 6, U. S. A.

FOR SALE

FOR SALE OR EXCHANGE-20 acres improved Missouri land, value \$30 Want 13x16 extractor, capping melter \$300.00 modified equipment.

Robert E. Cook, Aurelia, Iowa.

FOR SALE—Amber fall honey. A. G. Kuersten, Burlington, Iowa.
FOR SALE—Sixty colonies bees; clean, new

or Sale Sias and painted.

C. M. Piper, Garden City, Kans.

FOR SALE—Or trade for bees, one 20 and one 23 tract of land in the state of Washington; unimproved.
W. S. Earls, New Canton, Ill.

W. S. Earls, New Canton, Ill.

FOR SALE—We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it.

Dadant & Sons, Hamilton, Illinois.

HONEY AND BEESWAX

CLOVER, basswood blend: One 60-pound can, \$6.00; two, \$11.00; six, \$30.00; twenty up to one or two tons, \$9.50 per case. Delbert E. Lhommedieu, Colo, Iowa.

CAR white sweet clover extracted honey in double 60-pound cases 7% c per pound f. o. b. this point. L. M. Gulden Englevale, N. D.

HONEY for every purpose. We have it in any amount, light amber and white—clover, basswood, sweet clover, buckwheat. Write us what you need and ask for prices. A. I. Root Co. of Chicago, 224-230 West Huron St., Chicago, Ill.

HONEY FOR SALE—White extracted, in five-gallon cans, f. o. b. Nebraska, 9 cents. Light amber, f. o. b. Alabama, 9 cents. Five-case lots, 8 cents a pound both ad-dresses. M. C. Berry & Co., Box 697, Mont-gomery, Alabama.

WANTED—White clover extracted honey. Send sample and your lowest price. A. L. Haenseroth, 4161 Lincoln Ave., Chicago, Ill.

FANCY TUPELO HONEY in half barrels D. Steengrafe, 116 Broad St., New York

FOR SALE—Bulk comb and extracted honey; clover and light amber, best quality; Sample 10c.
Fred E. Hyde, New Canton, Ill.

150 CASES of white clover honey at 9c pound; 20 cases of clover and buckwheat (two-thirds buckwheat) at 7½c pound. One-pound sample at 25c. F. W. Summerfield, Waterville, Ohio.

HONEY FOR SALE—All grades, any quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

FOR SALE-Clover honey, new crop, 9c per pound in 60's. Two cans to case. William G. Blake, Port Huron, Mich.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colo-rado Honey Prod. Ass'n, Denver, Colo.

WANTED — 10,000 pounds thick, white honey. Edw. Klein, Waukegan, Ill.

FOR SALE—Fancy, extracted, white clover honey in new 60-pound cans. None better on the market. Ten cents for two cans or less; nine and one-half cents for more than two cans, f. o. b. here. Also amber honey. Quality guaranteed. Sample 25c.

E. J. Baxter, Nauvoo, Ill.

CLOVER extracted honey. Prices on request. Roy Littlefield, Exira, Iowa.

FANCY white comb, \$4.50; No. 1, \$4.25. W. L. Ritter, Genoa, Ill.

WHITE COMB HONEY—\$3.85 case. Marsalek Apiaries, Cadams, Neb.

FOR SALE—20,000 pounds fine basswood honey, 9½c; 9c entire lot; f.o. b. Portland. Sample 10c.
Ralph E. Blackman, Portland, Mich.

HONEY FO HONEY FOR SALE—White and amber honey in 60-lb., 10-lb. and 5-lb. tins. Write for prices. Dadant & Sons, Hamilton, Illinois.

FANCY buckwheat comb, also amber. Fine quality, low price. Write. N. B. Querin, lity, low price. Bellevue, Ohio.

FOR SALE—No. 1 clover comb honey, \$4.50 per case; No. 2, \$3.50. Buckwheat 50 cents less, 24 sections to case, six- or eight-case carriers. Buckwheat extracted, well ripened, fine, 7 cents, two 60-pound cans to case. Clover in 5-pound pails, \$9.00 per dozen; buckwheat, \$8.00. For \$1.00 extra will add two chunks comb to pail.

H. G. Quirin, Bellevue, Ohio.

FOR SALE—White clover honey in 60-lb. cans. Sample 15 cents. Alfred Stutt, Creston, Iowa, R. 5.

Alfred Stutt, Creston, Iowa, R. 5.
WANTED—A car or less quantity of white honey in 60-lb cans. Mail sample and quote lowest cash price for same.
J. S. Bulkley, Birmingham, Mich.
HONEY FOR SALE—In 60-lb, tins. White clover at 12c lb.; white sage at 12c lb.; white orange at 14c lb.; extra L. A. sage at 11c lb.; Hoffman & Hauck, Inc.,
Ozone Park, New York.

FANCY white clover extracted honey, any sizes. Prices and samples on request. Kalona Honey Company, Kalona, Iowa.

PARTIES wishing extra fine honey reasonable, any time, write Lee Horning, a Preducer, Morrison, Ill.

FOR SALE—White clover honey in 60-lb. cans. None finer. Satisfaction guaranteed, J. F. Moore, Tiffin, Ohio.

STURDEVANT, St. Paul, Nebraska. Finest quality clover honey.

SHALLOW frame white comb honey and white extracted honey.

The Colorado Honey Prod. Ass'n, Denver, Colo.

HONEY FOR SALE—Any kind, any quantity.

The John G. Paton Co., 217 Broadway, New York.

FOR SALE—Northern white, extracted and comb honey.

M. W. Cousineau, Moorhead, Minn.

FOR SALE—Our own crop white cloved and amber fall honey in barrels and cans. State quantity wanted and we will quote prices. Samples on request.

Dadant & Sons, Hamilton, Illinois.

SUPPLIES

FOR SALE—Straw skeps. Displayed with honey, they increase sales. G. Korn, Berrien Springs, Mich.

SAGGED COMBS are result of slackened wires caused by wires cutting soft wood of frames. Use metal eyelets. Per 1,000, 60c. Handy tool for inserting eyelets, 25c. Postage 3c per 1,000.

Superior Honey Co., Ogden, Utah.

SHIPPING CAGES — Comb and combless.

Sugar pine; machine made; in flat; no metal. Best and cheapest you can find.

Sample 15 cents, prepaid. E. P. Stiles, P. O. Box 422, Houston, Texas.

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We buy beeswax at all times and remit promptly.

The Colorado Honey Producers' Ass'n, Denver, Colo.

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"BEEWARE" and Dadant's Wired Founda-tion for the Northwest. Catalog prices. F. O. B. Fromberg, Montana. Beeswax wanted. Write for prices. B. F. Smith, Jr., Fromberg, Mont.

MISCELLANEOUS

HON-E-NUT Chocolates. Assorted packages and 5c bars. Descriptive and illustrated circular free. Fairmount Apiaries, Schuylkill Haven, Pa.

DOUBLE-BARREL introducing cage. Improvements make the world better. Price 25 cents. J. F. Diemer, Liberty, Mo.

RAT TERRIER PUPS—Bred for ratters.
Satisfaction guaranteed. Crusaders Kennels, Stafford, Kansas.

FIRE—No more fires. New method of rendering wax. Capping melter; liquefies honey and bee feeder. Send for circular. George Pratt, Topeka, Kans., 2235 Penn Ave.

THE DADANT SYSTEM IN ITALIAN—The "Dadant System of Beekeeping" is now published in Italian, 'Il Systema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

WESTERN HONEY BEE 2823 E 4th St.

WESTERN HONEY BEE 2823 E. 4th St.,
Los Angeles, Calif., published by Western
beekeepers, where commercial honey production is farther advanced than in any other
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The Prodigal---That Didn't Return

(The following verses were written for the American Bee Journal by Hon. Eugene Secor and appeared in the issue of September 5, 1888:)

A silly bee got on a spree, Out in a field of clover.
"I'll drink," said she, "my fill, te-he, And play the merry rover."

"Now what's the use to be a goose, And all the time be giving, When life is short and made for sport.

And all we get's a living?"

"So I for one will have some fun, And live a life of pleasure. Who said I ought to work for naught, And carry home the treasure?'

The day was fair. The balmy air Played gently with the flowers. By some strange spell, sweet hydromel

Distilled in nect'rous showers.

She frisked about, now in, now out, From every flow'ret drinking; Played in the sun till day was done

With no thought worth the thinking.

When night drew nigh she heaved a sigh.

Half sorry for her folly; But stubborn Pride, that purblind guide,

Soon banished melancholy.

Just underneath a plantain leaf Retired she in the gloaming. A nimble toad spied her abode; A wink-she ceased her roaming.

Toad Gourmands Feast on Insects, Stingers and All

Toads are commonly creatures that inspire dislike on the part of the beholder. Nevertheless, the Biological Survey of the United States Department of Agriculture finds that toads are distinctly useful in fields and gardens and deserve protection. Their usefulness depends on their appetite. They are gourmands, and eat all sorts of insects in great quantities. True it is that they eat some useful insects, but they eat so many more of harmful insects that the balance is much in their favor.

One of the peculiarities of the toad is its habit of eating stinging or poisonous insects and allied creatures as ants, bees, wasps, rose chafers, blister beetles, millepeds, and poisonous spiders. While they may cause the toad some slight discomfort, the pain evidently is not serious enough to vanquish the toad's appetite. Toads have been known

to eat certain plant-eating millepeds, which secrete the highly poisonous hydrocyanic acid .- U. S. Department of Agriculture.

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of American Bee Journal, published monthly at Hamilton, Illinois, for September, 1928:

STATE OF ILLINOIS,) County of Hancock,

Before me, a notary public in and for the state and county aforesaid, personally appeared M. G. Dadant, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Bee Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, rendered by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the

That the names and addresses of the publisher, editor, managing editor and busi-ness manager are:

Publishers, American Bee Journal, Hamilton, Ill.

Editor, C. P. Dadant, Hamilton, Ill.

Managing editor, G. H. Cale, Hamilton, Ill. Business manager, M. G. Dadant, Hamilton, Ill.

2. That owners are:
C. P. Dadant, Hamilton, III.
H. C. Dadant, Hamilton, III.
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M. G. Dadant, Hamilton, Ill.
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That the known bondholders, mortgagees and other security holders owning or holding one per cent or more of the total amount of bonds, mortgages or other securities are: bonds, mortgages or other securities are:

(Signed) M. G. DADANT, Business Manager American Bee Journal. Business manager and subscribed before me this fifteenth day of October, 1928,
BIRDIE ASH,

Notary Public
My commission expires March 6, 1930.

SUGGESTED SELLING PRICES HONEY—1928-29

In figuring sales to retailers deduct 20 per cent from retail price below. For jobbers, deduct an additional 10 to 15 per cent, Prices suggested are for good white grade. For amber, deduct 1 cent per pound.

Quantities of ten 60-pound cans and larger appear at jobbing prices on the table below.

| New England \$.40 | Atlantic Coast \$.35 | South- east \$.30 | Central West \$.25 | Plains \$.25 | Louisiana- Texas \$.25 | South- west \$.25 | Inter- mountain \$.25 | North- west \$.25 | Cali- fornia \$.30 | East Canada | West Canada |
|--------------------------|--|---|--|---|--|--|--|--|--|--|----------------|
| .75 | .70 | .60 | .60 | .60 | .60 | .50 | .50 | .60 | .60 | | |
| 1.25 | 1.15 | 1.00 | 1.00 | 1.00 | 1.00 | .90 | .90 | .90 | 1.00 | 1.00 | .90 |
| 2.25 | 2.25 | 1.80 | 1.90 | 1.80 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 2.00 | 1.73 |
| .16 | .14 | .14 | .14 | .12 1/2 | .12 | .12 | .12 | .11 | .12 | .13 | .13 |
| .13 | .12 | .12 | .12 | .11 | .10 | .09 | .10 | .10 | .10 | .12 | .12 |
| | .10 | .09 | .10 | .09 | .08 | .08 | .08 | .09 | .08 1/2 | | |
| | | .09 | .09 | | .08 | | | | | | |
| .65 | .65 | .60 | | | .70 | | | | | | |
| 1.40 | 1.40 | 1.10 | | | 1.25 | 1.10 | | | | | |
| 2.75 | 2.75 | 2.25 | | | 2.25 | 2.10 | | | | | |
| .40 | .35 | .30 | .30 | .30 | | | .25 | .25 | | | |
| 7.00 | 6.50 | 5.50 | 5.50 | 5.00 | | | 5.50 | 5.50 | | | |
| 6.00 | 6.00 | 5.25 | 5.00 | 4.50 | | | 5.00 | 5.00 | | | - |
| 5.50 | 5.75 | 4.75 | 4.75 | 4.00 | | | 4.50 | 4.50 | | | |
| | | | | | - 0-0 | 4.50 | 5.00 | 5.00 | | | |
| | | | | | | 4.20 | 4.50 | 4.25 | | | |
| | | | | | | 3.90 | 3.75 | 8.75 | | | - |
| | England \$.40 .75 1.25 2.25 .16 .13 .65 1.40 2.75 .40 7.00 6.00 5.50 | England Coast \$.40 \$.35 .75 .70 .70 .1.25 .1.15 .2.25 .2.25 .16 .14 .13 .12 .10 .10 .65 .65 .65 .1.40 .1.40 .2.75 .2.75 .40 .35 .7.00 .6.50 .6.00 .5.50 .5.75 | England S .40 \$.35 \$.30 .75 .70 .60 .60 .1.25 1.15 1.00 .2.25 2.25 1.80 .16 .14 .14 .13 .12 .12 .10 .09 .65 .65 .60 .1.40 1.40 1.10 2.75 2.75 2.25 .40 .35 .30 .7.00 6.50 5.50 6.00 6.00 5.25 5.50 5.75 4.75 | England Coast east West \$.40 \$.35 \$.30 \$.25 .75 .70 .60 .60 1.25 1.15 1.00 1.00 2.25 2.25 1.80 1.90 .16 .14 .14 .14 .14 .13 .12 .12 .12 .12 .10 .09 .10 .9 .09 .65 .65 .60 1.40 1.40 1.10 2.75 2.25 .40 .35 .30 .30 7.00 6.50 5.50 5.50 6.00 6.00 5.25 5.00 5.50 5.78 4.75 4.75 | England Coast east West Plains \$.40 \$.35 \$.30 \$.25 \$.25 .75 .70 .60 .60 .60 1.25 1.15 1.00 1.00 1.00 2.25 2.25 1.80 1.90 1.80 .16 .14 .14 .14 .12 .12 .13 .12 .12 .12 .11 .09 .10 .09 .09 .09 .65 .65 .60 .65 .65 .60 1.40 1.40 1.10 .40 .35 .30 .30 .30 .30 7.00 6.50 5.50 5.50 5.00 4.50 5.50 5.78 4.75 | England Coast east West Plains Texas \$.40 \$.35 \$.30 \$.25 \$.26 \$.25 \$.26 \$.25 \$.26 \$.25 \$.26 \$.25 \$.26 \$.27 \$.26 \$.2 | England Coast east West Plains Texas west \$.40 \$.35 \$.30 \$.25 \$.25 \$.25 \$.25 .75 .70 .60 .60 .60 .60 .60 .50 1.25 1.15 1.00 1.00 1.00 1.00 .90 2.25 2.25 1.80 1.90 1.80 1.75 1.75 .16 .14 .14 .14 .12 ½ .12 .12 .12 .12 .12 .12 .12 .12 .12 .12 .12 .12 .12 .12 .12 .11 .10 .09 | England Coast east West Plains Texas west mountain \$.40 \$.35 \$.30 \$.25 \$.27 \$.27 \$.27 \$.27 \$.27 \$.27 \$.27 \$.27 \$.27 \$.28 | England Coast east West Plains Texas west mountain west 3.40 \$.35 \$.30 \$.25 \$.26 \$.25 \$.20 | England Coast east West Plains Texas west mountain west fornin \$.40 \$.35 \$.35 \$.20 \$.20 | England |

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Eighth International Congress of Beekeepers at Turin, September 10 to 17

By George F. Jaubert General Secretary for the Next Congress

The eighth International Congress of Beekeepers held its meetings in September at Turin, Italy, and this Congress proved extremely useful through the important decisions which were adopted and which will have a favorable influence on the future of beekeepers' congresses in general.

Nearly two hundred beekeepers, mainly from Italy, were gathered around the venerable President, Professor Emeritus Edoardo Perroncito, of the University of Turin.

The foreigners were not numerous. France was represented by Messrs. Barthelmy and Achard, of the Society of Beekeeping of the Bouchesdu-Rhone, and by Mr. Jaubert, of Paris, official representative of the French Central Society. Canada was represented by Mr. Cyrille Vaillancourt; Switzerland by Mr. Mayor, President of the Romande Society, by Dr. Morgenthaler of Bern-Liebefeld and by a few practical beekeepers. Germany was represented by Professor Armbruster, of Berlin-Dahlem; Roumania by Dr. Begnescu; Spain by Mr. Bilbao; Belgium by Leon Tombu; Chile by the Chilean Consul of Milan. Hungary also had a representative.

The major interest of this Congress resides especially in the action taken at the meeting of Thursday, September 10, which sets a new pace for future international congresses.

The solicitations of diverse countries for the next meeting were as follows:

1. A letter from Dr. E. F. Phillips, of Cornell University, solicited the meeting for the United States. A letter from Dr. Morgenthaler, on the other hand, suggested that the fourth International Congress of Entomologists had just met in Ithaca and had set the time for the next meeting at Paris in 1932, and that it was eminently desirable that the ninth Congress of Beekeepers be held at the same place and at the same date.

2. The necessity was shown not to have several international congresses during the same year, such as those of the Entomologists, the Apis Club and the Beekeepers' Congress, as had happened in different localities, making a useless division of effort and of expense.

3. The necessity of limiting the

international congresses to once in four years, so as to leave between their dates a sufficient time to bring rise to positively international questions to be discussed.

4. The desire expressed by a number of eminent members to reach an understanding between the International Entomologists, the English Apis Club and the International Beekeepers' Congress to unify the divergent interests of these diverse associations and blend their actions.

In accordance with the enlightened efforts of the two Presidents of the Commission, Vaillancourt and Mayor (Mr. Dadant, the third one, being absent), of Dr. Morgenthaler, of Advocate Marinelli, of Dr. Gegnescu and a number of others, the following resolutions were voted unanimously:

1. The ninth International Congress of Apiculture will convene in Paris in 1932, with George F. Jaubert as Secretary-General.

2. The three Presidents of the International Commission are authorized to establish regulations for international congresses after the suggestions of Mr. Vaillancourt.

3. The three Presidents of the International Commission are instructed to enter into an understanding with the managers of the International Congresses of Entomology and of the Apis Club. They will render a statement of the first results at the next meeting of the Apis Club, which is expected to meet in Berlin in 1929 or 1930, depending upon the facilities which Dr. Armbruster will encounter in his country.

4. Mr. Leon Tombu, Secretary-General of the Commission, resigning, is replaced by Count Dr. A. Zappi Recordati, Commissioner Extraordinary of the section of beekeeping of the National Fascist Confederation of Italian Agriculturists.

Upon the motion of Mr. Tombu, the permanent Commission of the International Congresses is elected

Presidents—C. P. Dadant, C. Vaillancourt, A. Mayor.

Members:

Algeria—A. Bernard.
Germany—Dr. Armbruster.
England—(Not named, to be designated later.)
Australia—Tarlton-Rayment.

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innderBelgium—S. Thibaut. Canada—C. Vaillancourt. Chile-Juan Barriga. Scotland-John Anderson. Spain-J. De Linan I Heredia. United States-James I. Hamble-France—A. Mathieu. Ireland—J. G. Digges. Italy-Compans di Brichanteau. New Zealand—A. R. Bates. Argentine Republic-Theodore J. McKeon. Roumania-Dr. Begnescu.

Switzerland-A. Mayor.

A further report will give an account of the addresses presented at the sessions of this Congress, which terminated, on the evening of September 14, in a reception by the Podesta of Turin at the Palace Madame. This reception was quite a success through the affability of the Podesta and of the Prefect, besides an excellent lunch in the sumptuous halls of the Palace. This Palace or "Castello" was built in the latter part of the thirteenth century by William de Montferrat. Its present name was given it in honor of "Madame Reale," the mother of King Victor Amedee, who, after the death of her husband, ordered the construction, in 1718, of the magnificent double stairway and of the marble colonnade which decorates the facade. This is in Louis XIV style, together with the decorations, the paintings of the ceilings and the furniture, which are real chefs d'oeuvres.

In addition to the eminent and kindly President, Professor Perroncito and his active Secretary, D. G. Angeleri, the Fascist Government was represented at the opening of the Congress by the Podesta of Turin, the Prefect and the Chief of the Ministry of Agriculture. During the different meetings, it was Count Dr. P. Thaon di Revel who represented the Government, and we cannot give too much praise to his kind-

On the whole, some excellent work was done in Turin during those four days, to the great benefit of international beekeeping.

Pine Needles for Smoke

I have found that the needles of the white or long-leafed pine are good fuel for the smoker. They will burn just as well and quiet the bees much better than anything I have ever tried, including Dr. Miller's saltpeter rags, or his old gum shoe, or automobile tubes, which he used to frighten the black German bees.

T. Gorsuch, Maryland.



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The Queen's Sting

By Allen Latham

It has been several months since I have had an opportunity to fence with Jay Smith. Some of his writings are so obviously straight to the point that he leaves no opening for an attack. In some cases they are so good that they merit applause. I wish here and now to thank him for his information regarding the introduction of ripe cells and virgins. I refer to his advice to feed nuclei or colonies into which ripe cells are put. Since adopting Jay's advice I have had no cells cut down.

There are times that Jay Smith exhibits the weakness common to many of us, namely: to state that a thing is so or not so solely on the argument that he has never seen the thing in question. On page 387 Jay would have us believe that the royal jelly gives peace of mind and quiet nerves to the queen, and he goes on to say that the royal sting is never used except against another queen. It is quite evident that Jay never saw a queen sting a worker bee. It is now many years since Dr. C. C. Miller disputed my statement that a queen would on occasion sting a worker.

It was my pleasure to visit Dr. Miller a few days during that banner year of his when his section-honey crop averaged 266 2/3 sections per colony. While in his apiary on a Monday, the good doctor took a look at some caged virgins. These had been caged a few days and did not appear as lively as one might wish. Dr. Miller decided to admit some workers into one of the cages to feed up the inmates. The very first worker admitted was grabbed by the virgin queen and instantly stung to death. I observed the fact with keen appreciation, and shall never forget the doctor's remark: "I would not have believed it if I had not seen it." As I had seen the same thing not infrequently, I was glad indeed to have that virgin back up my statement.

If Jay wishes to see this thing happen, let him proceed as follows: Cage several virgins and place cages where worker bees will look after the virgins. Keep them thus three to five days. If vigorous, the queens will keep up a constant piping and will get crazy to fight each other. Now insert the poor worker bee.

Just how many things besides other queens a queen will sting I do not know. I do know, however, that they will sting human beings. I have been stung acutely three times by queens, and slightly a score of times. I have never been stung by a laying or fertile queen. Dr. Phillips tells

me that he also has been stung by a queenbee.

If Jay is doubtful let him try it out himself. The fighting mad virgin is again the queen which will turn the trick. I have not been stung for several years by a queen, because I no longer use nursery cages. It was when I used nursery cages that I had it happen many times. Virgins twenty-four to thirty-six hours old were being transferred from nursery cages to regular introduction cages. The queen was shaken from the nursery cage into my open hand and the fingers instantly closed. The queen was then run from the hand into a cage.

Sometimes I would have upwards of one hundred virgins treated thus. After a dozen or so of virgins had been transferred from cage to cage, I would note that the palm of my hand was itching and that in some cases the thinner skin between the fingers was feeling as if I had handled a nettle. Suddenly, while transferring a virgin, I felt a painful sting and supposed that I had unwittingly got a worker mixed up in the business of transferring. No worker materialized. Twice afterward I felt the same painful sting between the fingers and each time opened up my hand at once to see if any worker was present. In each case only a queen was there. make the thing sure, one of the queens was so accommodating that she had not withdrawn her sting when I opened up my hand. I distinctly saw her pull her sting from my finger.

No, friend Jay, it does not do to make absolute statements regarding the actions of bees. Always leave an opening for the action which you may never have observed.

Connecticut.

A Real Trial of Carniolan Bees

Wallace R. Smith, of Cameron, Illinois, has become so much interested in the discussion of the Carniolan bees that he has requeened an entire apiary with Carniolans. He proposes to give them a sufficient trial to demonstrate to his entire satisfaction whether they are as good or better than the Italians for Illinois conditions.

An interesting meeting of the local beekeepers' association was recently held at Mr. Smith's apiary, with Henry Dadant as the principal speaker. sta nat Th due we has its ma for rap

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Intermountain Association Markets Honey

By Walter L. Clark

The intermountain honey crop has started on its way to points of destination in various parts of the world. The Mountain States Honey Producers' Association, comprising eight western states in its organization, has found outlets for the product of its honey producing members and is making speedy shipments to several foreign ports, and members will have rapid returns for the sale of their product.

Directors and officers of the association met for their annual meeting on October 2 and 3 to discuss problems relative to the production and distribution, with all of the states represented by their directors. It was decided to continue the policy of selling the honey on the delivery price basis. The price set for honey C. I. F. Hamburg, Germany, is \$11.50 per fifty kilos, or about 7½ cents per pound F. O. B. shipping point. Corresponding prices will prevail to wholesalers in London, Paris, Liverpool and other European cities.

A shipment of 700 cases of honey left Seattle, Washington, recently, the occasion getting much publicity in Seattle papers, as it was the largest lot of honey ever shipped from the Washington port. Much of this honey came from the southern Idaho honey producers. It was also stated that, during the first week of October, Portland and Seattle ports will handle 2,000 cases of honey for the association. One lot of 500 cases will go to Genoa, Italy; one lot of 400 cases to Hamburg, Germany; another lot of 200 cases goes to London, and a shipment of 100 cases is billed for Liverpool.

Thus Idaho and western honey is finding its destination in widely lo-cated spots of the globe. The association started less than three years ago. With 100 members listing 22,-000 colonies of bees comprising its membership fifteen months ago, the Mountain States Honey Producers' Association has grown steadily until now it markets the product of 370 members with a listing of 84,000 colonies of bees. The quality product of this organization is in demand in the United States as well as in the foreign market and demands top prices wherever sold.

A new product of the association, called "Creme Whipt" honey, will soon be placed on the market, it was announced. This product has been in the experimental stage for some time and is now ready for the market. Boise, Idaho, retailers will be the first to offer the new product to the public.

OVERHEARD at the PROVINCIAL EXHIBITION

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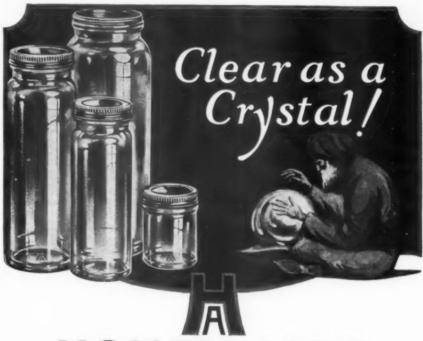
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When Writing Advertisers Mention The American Bee Journal

Packers Warned Concerning Heating of Honey

A number of recent shipments of American honey to European countries, according to reports to the United States Department of Agriculture, are alleged to have been classed as overheated.

The German market in particular demands unheated honey, and a recently enacted German law classes honey in which the diastase has been destroyed or impaired as adulterated honey, and prohibits labeling overheated honey as pure honey.

The Bee Culture Laboratory of the United States Department of Agriculture has analyzed several samples of honey which, because of overheating, have been returned to American exporters, and an analysis in these cases confirmed the fact that the diastase had been destroyed. However, in the cases that have come to the attention of the apicultural officials of the department the honeys in question were not produced in the United States, but were simply shipped through the ports of this country, and for this reason perhaps the German buyers are scrutinizing carefully all shipments of honey coming from this country. Fortunately most of the large exporters do not heat honey.

In ordinary commercial practice, when extracted honey is packed in sixty-pound tins it is not necessary to heat it, as shippers are generally well aware of the fact that there is less leakage and that the honey arrives at its destination in better condition when it is in the crystallized Heating honey dissolves the crystals and causes it to remain in a liquid condition for a considerable length of time, depending somewhat upon the floral source of the honey.

It is not known just how important the presence of diastase is in honey. Handlers of honey are aware, however, that if honey is not carefully heated when it is necessary to prepare it for a market which requires liquid honey, or to facilitate straining, both the flavor and the color of the honey may be impaired by the application of too much heat. It should in no case be heated to more than 140 degrees F. This temperature ordinarily will not destroy the diastase; and packers for foreign markets are warned in no case to heat honey beyond this point. It is necessary also that the honey be held at this temperature for the shortest time possible-Press Service, U. S.

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U. S.

Must Honey Be Extracted from Combs Before Vapor Treatment?

A Question Answered by A. V. Small

Question: Your article in the August issue of the American Bee Journal was read with interest, as I am bothered with American foulbrood. I would like to know whether you extracted the honey under the top bars of brood frames before giving said combs the vapor treatment? I have treated twenty combs, that did not contain honey, with formaldehyde according to Jay Smith's plan given in the American Bee Journal, that of taking two bodies with empty space above and below, with solution in pan on top of frames, then sealing all joints with parawax and leaving stand in kitchen for four weeks. I have bees on ten of these combs and they are healthy. A Mr. ---, in "Bees and Honey," stated he did not extract honey from diseased combs and had success.

Harold Garber, Ohio.

Answer: "The alcohol-formalin vapor treatment is so new that it would be unwise to make any positive statements as to results. I did not extract the honey, and the combs developed no disease. The important thing is to know just how long these combs should be treated, and this we cannot determine without experimenting.

"I believe if every beekeeper who tries the vapor treatment would report direct to the bee papers, we would soon have a practical method worked out, which I feel sure will be superior to methods used in the past."

Death of W. H. Laws

W. H. Laws, apiarist, queen breeder, and gentleman, passed away at Wharton, Texas, October 15. Mr. Laws has been a queen breeder and producer of honey for many, many years, operating and residing most of the time in Texas. He and his son, however, operated many colonies in Wyoming for several years, but he came back to Texas to spend his declining years.

Our sympathy goes out to his widow and his many friends throughout the United States.

Carno-Italian Cross, Early Workers

We find that the so-called Carniolan-Italian cross, a cross between the pure Carniolan and the copper-colored Italian, not Cyprian, make much better honey gatherers here, and will work on colder, wetter days than either of the pure strains.

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Productive Beekeeping — A general textbook. Covers all phases of bee work. Cloth, 325 pages, 126 illustrations. Postpaid \$3.00

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